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The Discovery of Engravings upon Flint Crust at Grime's Graves, Norfolk

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[Read 27th January 1921]

EXCAVATIONS at Grime's Graves, Norfolk, during September 1920, revealed a new chipping site (Floor 85), and resulted in the discovery thereon of two pieces of engraved flint crust, associated with a series of flint implements of Le Moustier type, bone tools, and pottery, upon a living level immediately overlying glacial sand.

As only one engraving has previously been found upon an actual prehistoric site in Britain, viz. the well-known horse's head on bone from Creswell Crags, Derbyshire, the importance of this find will be appreciated. Incidentally it affords valuable evidence in favour of an early date for the beginning of the Grime's Graves industry.

The new floor is situated near the south-east margin of the mining area, immediately west of the Tumulus Pit. An area of 36 square yards was excavated to a depth of 3 ft., but the superficial limit of the floor was not reached. Over the whole area examined two distinct occupation levels existed, each including large hearths with quantities of charcoal, pot boilers, and the usual solidly compacted mass of flakes, fine chippings, blocks of raw material, and implements more or less perfect, which characterizes these floors.

On the northern margin of the excavated area a third occupation level was discovered, extending over an area of 20 square feet, consisting of a layer of black humus up to 6 in. in thickness, mixed with charcoal and quantities of animal bones split

and broken. This layer—which has not been fully worked out—contained a hearth upon which were a pair of bronze tweezers and fragments of coarse pottery, since identified as of the Bronze Age. Two bone tools were also found. From the humus immediately beneath the turf was taken, at separate points, a piece of black pottery described as probably of the Early Iron Age, a fragment of grey Romano-British ware, and a sherd of provincial red Samian ware.

The Bronze Age level will be referred to as Floor 85 A, the intermediate floor as 85 B, and the lowest floor as 85 C. Floor 85 A rested at 12 in. under the surface level upon sandy chalk rubble; probably spoil from the pit on the west. This sandy rubble was from 6 in. to 8 in. thick and covered Floor 85 B, separating it from 85 A. The underside of Floor 85 B was 1 ft. 9 in. below the surface. Floor 85 C was separated from 85 B by a compact mass of chalk rubble, sandy in places, and 7 in. to 9 in. thick, which enclosed the upper flakes of the lower floor. The floor itself (85 C) was 3 in. to 5 in. thick, and rested upon, and was partly embedded in, the red sand, which is decalcified boulder clay, and forms the undisturbed subsoil at a depth of 2 ft. 9 in. to 3 ft. below ground level. It was upon Floor 85 C that I discovered the pieces of engraved crust here figured.

The first, and most important, was embedded about 2 in. deep in the red sand. It is executed upon a rough untrimmed outer flake of floorstone, consisting almost entirely of the thick brown crust of the flint. The engraving is a naturalistic representation of a stag or perhaps an elk, certainly one of the *Cervidae*, disturbed whilst browsing on rough ground, amidst long herbage. The head is held erect and three stalks of grass are hanging from the mouth. The right foreleg is raised and partly covered by the herbage. The left foreleg is on the ground, buried in herbage, as are both the hind legs. The shaggy hair clothing the breast is indicated by a series of fine engraved lines. The antlers are only indifferently drawn, a fault common to similar engravings from the Dordogne caves. The short stumpy tail is suggested by three skilful touches. Rough ground or rocks are indicated in the foreground between the hind and forelegs by three lines deeply incised. The flake measures 3·2 in. by 1·6 in. Practically the whole surface is occupied by the engraving. The surface is slightly convex.

Flint crust of this nature, though softer than flint, is exceedingly hard. The piece under notice will scratch glass. Consequently considerable skill in engraving must have been necessary to produce a drawing, on such hard material, having the quality and truth of

line exhibited in this example. The difficulties of the artist are shown in his somewhat uncertain rendering of the head and raised foreleg when compared with the hind-quarters and body. This slight uncertainty of line in drawings upon flint and stone is noticeable upon numerous continental examples figured by M. Salomon Reinach in his *L'Art Quaternaire*. The engraving is executed in incised outline, sharp though not deep ; the deepest being the antlers and the shallowest the head.

The second example occurred in the upper layer of Floor 85 c,

Engravings on flint crust from Grime's Graves.

partly in contact with overlying chalk rubble, 4 ft. distant from the stag engraving. It also is executed upon crust, in this instance forming the back of a curved angle flake-knife—5·1 in. long, extreme width 0·8 in.—having a battered edge and a faceted butt. The engraving is of varied character, the most important consisting of an animal's head, perhaps a hind. The ear, throat, and neck are boldly incised ; the remainder, which would require more careful drawing and a steadier hand, is in shallower engraving. A mane and long hair under the jaw are well defined. An oblique line from the jaw upwards to the right probably represents an impaling arrow or lance. To the left of the head is a vertical line, and running into it a bold sweep terminating in a sharp curve

and returned angle. Above this is a V-shaped form laid horizontally. All these lines are deeply incised. To the right of the head is a group of apparently formless lines similar in character to those upon pieces of crust noticed in previous excavations on other floors, to which Dr. A. E. Peake called attention in 1916. Several specimens of this sort were obtained from Floor 85 c in addition to the drawings under notice.

The engravings were associated with several important implements of flint, notably a proto-celt, or double *racloir* of Le Moustier type, $7\frac{1}{2}$ in. long and $3\frac{1}{4}$ in. in extreme width. It is a flake implement struck from a tortoise core, the bulb being afterwards partly trimmed away and the edges carefully worked with secondary chipping on the upper face only. This was taken from a pocket in the red sand beneath Floor 85 c, together with a smaller implement of similar type and a large *racloir* worked out of brown crust. Eighteen inches distant, in the upper layer of Floor 85 c, in contact with chalk, was a large ovate hand-axe of Drift form, 7·1 in. by 4·3 in., also five *racloirs*, numerous *dos rabattu* knives, a small Le Moustier point, and a large *poinçon*. In the same pocket as the proto-celt were several fragments of pottery forming portions of the base and side of a vase. This pottery is identical with that discovered in the pits excavated in 1914 and upon various floors since. One foot distant from the pocket, and lying in the sand, was an implement formed of a deer antler tine, perforated for suspension at the thick end, and rubbed down at the point. Another example, but unperforated, was found a few inches distant from the stag engraving; and 3 ft. therefrom, also in red sand, a bone piercing tool 4·9 in. long, worked from a fragment of a long bone rubbed down and polished.

After writing the foregoing I received from Dr. A. E. Peake a series of engraved crusted pieces found by him on various floors at Grime's Graves between 1916 and 1920. In most cases the engraving is of the apparently formless variety already referred to. Two pieces are, however, worthy of special attention in view of the more elaborate drawings already described.

The first of these was found in September last upon Floor 75, and bears a representation of an animal's head very deeply engraved, also what may be a leg, foot, and two arms of a human figure. Examples from French sites show that the human figure is very rarely well drawn, and several examples might be cited that are no more faithfully rendered than this.

The second example, in addition to several curved lines and combinations of lines, has upon it a well-drawn animal's head; also, at one corner of the piece, engraved lines suggesting the

nose and one long ear of an animal; the eye being supplied by a natural scar left upon the nodule by the falling away of a spicule during its formation.

The practice of engraving animals upon stone and bone in a naturalistic manner, generally accepted as a characteristic and exclusive feature of the late Palaeolithic period, also the similarity in form and workmanship of the flint implements associated with the engraved pieces just described, with recognized Le Moustier types, seem to show that Grime's Graves were in occupation by Le Moustier man, and that the site has been in continuous, or at all events successive, occupation down to the close of the Bronze Age.

I was associated in these excavations with Mr. B. W. J. Kent, F.S.A.(Scot.), and assisted on several occasions by Mr. J. B. Sidebotham, both of whom were present when the engraved pieces were discovered.

Discussion

Mr. Reginald Smith was prompted to congratulate Mr. Armstrong, not so much on his good fortune in making a discovery of supreme interest as on the care he must have exercised in scrutinizing every piece of flint brought to light during excavations made for that very purpose. He had already done excellent service at Grime's Graves in planning the whole series of pits for the Prehistoric Society of East Anglia, and was at last rewarded for his manual labour in investigating the floors. The flints exhibited by the author and Dr. Peake represented a vast harvest, and were sufficient to give an idea of the industry concerned, on which the engraved stones were destined to throw a very welcome light. Authorities at the Natural History Museum regarded the more complete animal as an elk (*Alces machlis*, known in America as the moose), and stated that the species went back as far as the Forest-bed of Cromer, at the base of the Pleistocene. But whatever its artistic merits, the engraving was not a portrait, and there might be a difference of opinion as to the animal represented. The long legs and short body were in favour of the elk, but it was difficult to believe that the massive palmated antlers of that animal escaped the notice of the artist, who had produced something more like those of a red deer. The length of limb, combined with a short neck, compelled the elk to kneel in order to browse on grass; and the bent foreleg might indicate that action. As in the famous Thayingen engraving of a reindeer grazing, the hoof was realistically hidden by herbage. The discovery of two undoubted animal figures gave additional significance to the chalk carvings in the round found at the Graves, as well as to the scratches on various pieces of flint-crust exhibited by Dr. A. E. Peake. Those, like Mr. Armstrong's specimens, had been traced in white water-colour for purposes of exhibition and photography, but the original condition could be restored at will.

Besides the Creswell Crags[1] and Sherborne engravings,[2] the figureof a goat had been detected by Mr. Lewis Abbott on a pebble from Nayland, Suffolk, in the collection of Rev. J. D. Gray, by whose permission it was exhibited to the meeting. Illustrations of it were published in *Journ. Suffolk Institute of Archaeology*, xv (1913), p. 3, and the *Sphere* of 31st January 1914, p. 132.

Rev. H. G. O. KENDALL was not convinced that the engraving dated from the palaeolithic period, the evidence to the contrary being in his opinion overwhelming; and he would have liked to discuss the flints exhibited. There was a prevalent idea that several cultures extending over a long period were represented at Grime's Graves, but that was not supported by evidence. The period of mining there was a short one, and the few phases of culture covered a limited period: thus the celts were not far removed in time from the side-scrapers, and his own excavations last summer showed them side by side. With the aid of his daughter, he had identified some diminutive worked flakes as arrow-heads. Several scratched specimens in his collection had straight lines parallel for three inches, but one had a short line with a single barb, and another bore a V-shaped mark. He interpreted some of the lines on specimens exhibited by Dr. Peake as arrows, and inquired if the pottery found at the lowest level had been submitted to experts.

Mr. DALE had followed with interest the correlation of the newly discovered works of art with similar productions of palaeolithic man, and recalled the exhibition of the Creswell Crags horse at the Geological Society in 1875. The associated series of mammals exhibited on that occasion belonged to the palaeolithic fauna. The Grime's Graves flints on the table had converted him to the view that the industry they represented was not neolithic.

The PRESIDENT warmly congratulated Mr. Armstrong on a discovery which was no less than wonderful whatever its date might prove to be; and the Society was fortunate in being the first to discuss it. Rude as it was in some respects, the art of the engravings seemed of the same character as the French Cave series, though he would not say that the resemblance was conclusive. In recent years discoveries at Grime's Graves, Northfleet, and elsewhere had reduced the sequence of prehistoric periods to a state of flux. If type, material, and coloration, singly or collectively, meant nothing at all, the whole structure of prehistoric study was undermined. In any case the Grime's Graves industry did not seem to belong to the ordinary neolithic period. The polishing of stone implements had generally been attributed to later ages, but palaeolithic man of the Cave period habitually polished other materials, and there was no reason why he should not have treated flint in the same manner. It was therefore erroneous to speak of the age of polished stone.

[1] Evans, *Stone Implements*, 2nd ed., fig. 413 F; Brit. Mus. *Stone Age Guide*, 2nd ed., fig. 75.

[2] *Quart. Journ. Geol. Soc.*, lxx (1914), 100.

Excavations at Frilford

By L. H. Dudley Buxton, M.A.

[Read 2nd December 1920]

History of the Site. Excavations were carried out on the site by Mr. Akerman in 1864 and 1865 and in the two following years and by Dr. Rolleston, then Professor of Anatomy and Physiology, at various times between 1864 and 1868. The results of the excavations were embodied in papers published by this Society.[1] He appears principally to have assisted at quarrying operations which were then in progress, but also to have searched one or two other small areas. No map of his excavation is extant, and according to his assistant William Hine, who is still alive, no map appears to have been made. The areas probably excavated by him are marked with a cross on figure 1.

Since that time a number of graves have fallen into the quarry, and scattered finds appear to have been made from time to time, some of which were examined by Professor Rolleston and after his death by Professor Moseley.

In the spring of 1920 an undergraduate society, the Oxford University Archaeological Society, was anxious to do some excavating and asked me to find a site and direct the work. By kind permission of Mr. Aldworth, the owner of the property, we were able to start at Frilford in the middle of the Hilary Term, and spent week-ends there during Term, and four days at the ends of both the Hilary and Trinity Terms. The labour was provided chiefly by junior but also by senior members of the University, and honorary members of the Society, especially Sir Arthur Evans, Mr. Balfour, and Mr. Leeds materially assisted the excavations by advice and personal visits. Mr. Leeds has helped me very much in the preparation of this paper. I am indebted to Professor Arthur Thomson both for his keen interest in the work and also for putting the resources of the Anatomical Department at my disposal.

Position. The site is situated about a hundred yards to the west of the Oxford-Wantage road and almost opposite the eighth milestone from Oxford (see fig. 1). It lies on the sloping ground above the river Ock. A Roman villa about half a mile to the

[1] *Proc. Soc. Ant.*, 2nd Ser., iii, 136; *Archaeologia*, xlii, 417; xlv, 405.

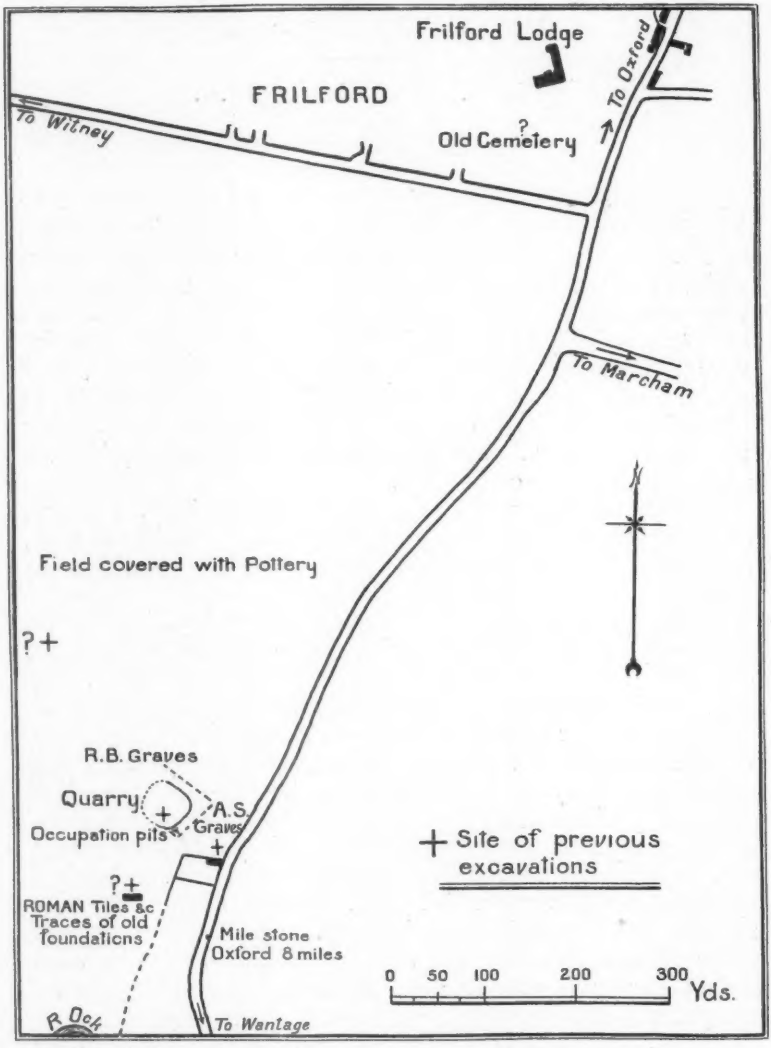


FIG. 1. Sketch-map showing position of Frilford cemetery.

north-west was excavated by Sir Arthur Evans and Professor Moseley in 1884.[1]

The Wantage road is stated on some maps to be a Roman road, but this is uncertain. Although finds here have been fairly numerous, it is clear that the site is extremely extensive. Scattered graves certainly extend as far as the village of

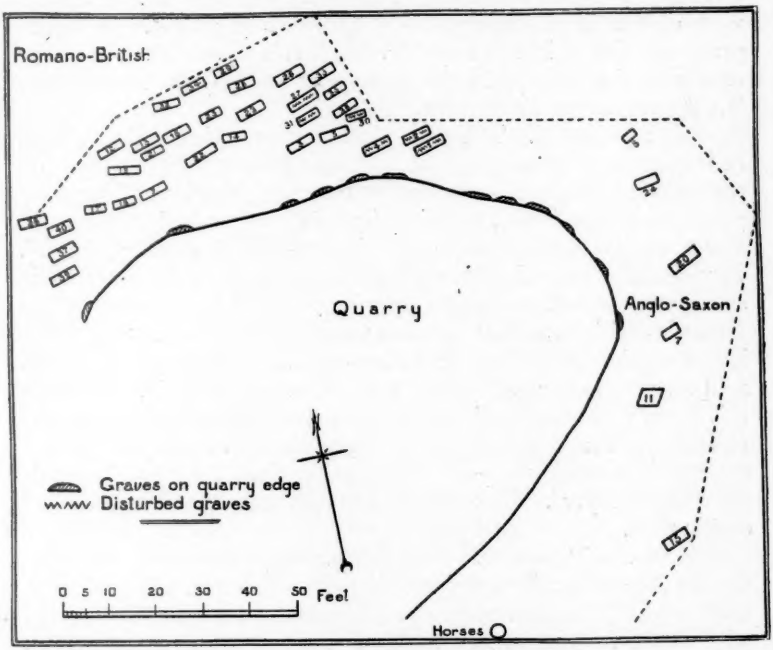


FIG. 2. Plan of the Frilford cemetery.

Frilford, as skeletons were said to have been found on the site of Frilford Lodge, and local tradition suggests that the cemetery does really cover a wide area. The small corner excavated contained forty graves, and it became clear when the long vacation and the time for ploughing the land arrived that we had by no means finished the site. Rolleston excavated 134 graves, and it is certain that a large number has been disturbed by the falling of the quarry face; indeed, the quarry contains a large number of scattered human bones (see fig. 2). The position of the old graves can be seen in the quarry face.

The cemetery can be conveniently divided into two parts. The

[1] *Archaeological Journal*, liv, 340–54.

north-western part was with one possible exception Romano-British. The south-eastern was Anglo-Saxon. The two were not found side by side : the area at present existing between the two portions of the cemetery was trenched but nothing was found. The north-east limit of the Romano-British cemetery has been defined, but other limits are not known. The cemetery appears to extend a certain distance to the west ; but excavations on the west of the actual quarry failed to find any graves. A Saxon grave was found in 1912 by Mr. Leeds and myself in the northern corner of the quarry, indicating that probably both Roman and Saxon graves occurred on the site.

Nature of the Site. The geological strata are clearly defined and of importance for our purpose. From above downwards there is first a layer of black humus used for ploughland varying from 30 cm. to 40 cm. (12 in. to 16 in.) in depth with occasional pockets. For convenience of terminology this layer will be called 'plough'. Immediately beneath the 'plough' is a floor of broken oolitic stone, very well defined and occurring everywhere except over the Romano-British graves ; in cases where it did overlie these latter it showed signs of having been removed when the grave was dug, and thrown back again when the grave was filled in. Beneath this floor, and often indistinguishable from it, we sometimes, but not always, found a sandy stratum, made up of fairly large and small stones in a broken-down oolitic matrix. I have called this the 'stony layer'. The fourth stratum was found to be hard oolitic rock.

Romano-British Graves. The Romano-British graves had been cut in the oolite with considerable pains. The rock is hard, and until a working surface has been cleared it can hardly be worked with a pick. The graves were cut to a depth of about 30 cm. (12 in.) in the oolite in the case of adults, but children's graves and some women's graves to which I shall have occasion to refer later were shallower. As a general rule the graves were 50 cm. (19¾ in.) broad and 165 cm. (5 ft. 5 in.) long for females and 185 (6 ft. 1 in.) for males. The feet lay towards the north-east, but although there were definite rows, placed head to foot in some cases with great regularity, the system was not strictly adhered to. It would appear that at a late date in the use of the cemetery certain of the graves were disturbed to make way for later burials (graves no. 1, 2, 4, 27, 30, 31). The disturbed graves contained such complete, though broken, skeletons, that there is little doubt that whoever disturbed them buried them carefully again. It will be seen from the plan that burials 33, 35, 38 do not follow the usual arrangements, and one body (38)

actually had no grave cut for it in the rock, but was buried in the plough.

Grave Furniture. The Romano-British graves contained a number of iron nails which appeared from their position to have been used as coffin nails. In some cases coins had been placed with the body, and in one grave (38) the coin was actually in the mouth. There is reason for believing that this grave was later than the graves to the west of it. Most of the coins found are too damaged for recognition.

The only other objects found in the graves were a number of echini (fossil sea-urchins). I was at first inclined to think that they had been placed there on purpose, and Mr. Henry Balfour suggested to me that as they are known as 'fairy loaves' in some parts of the country they may have been conventionalized offerings to the dead, taking the place of food. Further experience of the site has inclined me rather to the view that the presence of these fossils was due purely to chance, as they do occur in the rock. We have in a few cases found them *in situ*, but they were certainly more common in the graves than elsewhere, and the fact that they appear to have been placed opposite the joints of the skeleton would seem to suggest that there was some method employed in the arrangement.

Coffins do not appear to have been an invariable rule; in some graves a Roman tile or piece of flat stone had formed a lining to the grave. They may have formed 'packing' where the coffin did not fit the hole in the oolite, or have taken the place of a coffin, but they were in no case continuous. One grave was filled with a series of flat oolite stones which may either have formed part of the sides or, more probably, the top of the grave. In grave 31 a fragment of a spoon was found. The grave, however, had been disturbed.

Sherds, which are extremely common over the Anglo-Saxon part of the site, were found less frequently in the neighbourhood of Romano-British graves, and very rarely, except in the unusual graves at the east end of the cemetery, in the graves themselves; no whole pots were found in the Romano-British graves.

The bodies were extended on the back; in some cases a stone had been used as a pillow. The hands were arranged as follows:

Both hands at side: 3, 14, 17, 19, 22, 23, 28, 32, 38.

Left hand at side, right forearm and hand flexed over pelvis: 26, 29, 35, 36, 39.

Right hand at side, left forearm and hand flexed over pelvis: 25 (child), 33, 34, 37.

Both forearms flexed over pelvis: 5, 7, 8, 9, 40.

Children were buried in shallow graves; the men usually in deeper graves and some women, whose osteological remains suggest a less refined type, were found in shallower graves, for example, no. 17.

A good deal of evidence of Roman occupation was found away from the Roman tombs in the neighbourhood of the Saxon site, about 50 yards south-west (see fig. 1). In addition to very large numbers of sherds, pits below the level of the plough were found full of red earth. In these were found fragments of Roman pots of which sufficient remained to suggest that they were placed in the pits, either whole or in a recently broken state. From a study of the ground, I am inclined to believe that these pits were not dug and filled up again with earth as was done with the graves, but that they were either used as occupation pits or as receptacles for rubbish. The remains of a Romano-British brooch were found in the plough, and a coin of Crispus (317–26). Close to these pits we found the bones of several horses. There was no evidence for dating them, and they may have been waste agricultural products. From the condition of the bones, however, it may be safely argued that they were not modern.

Saxon Graves. In spite of considerable trenching only five Anglo-Saxon graves were discovered, and a small cist, numbered 6 on the plan, carefully made of rough-hewn stones. The top had been disturbed in ploughing the land, and nothing was found inside. The cist was a slightly irregular trapezoid, the length being just over 50 cm. ($19\frac{3}{4}$ in.), and the breadth about half the length; the floor was made of flat oolitic stones. These appeared to have been put down first. A single row of side-stones, six in number, had been then put up. On top of them flat stones had apparently been placed in position, but these had either fallen or been removed, probably in ploughing, as the top was only just below the surface of the ground.

The Saxon graves were just below the surface of the land, and did not penetrate into the oolite, to which circumstance we owe their extremely bad preservation. As far as could be judged, a hole was dug through the upper part of the stony layer, and the body was placed in it, whether with or without a coffin it was impossible to decide, and large flat stones were placed on top so as to form a flat pavement over the grave. In the grave were found numerous animal bones, sherds, oyster-shells, and sometimes Roman coins.

The Saxon graves are numbered on the plan 7, 11, 15, 20. No. 7 consisted of a series of large stones forming almost a flat surface, just below the level of the soil, so close that it seems

strange they were not ploughed up. Underneath the stones lay the body of a female child. A Roman coin was found in the plough close to the graves.

No. 11 was that of a woman; the right forearm was flexed over the pelvis. No. 15 was also that of a woman; the position of the hands could not be determined. The contents of these two graves will be described later. No. 20 contained the body of a man, but no grave furniture; the right arm lay alongside the body; the left forearm was flexed over the pelvis. The grave

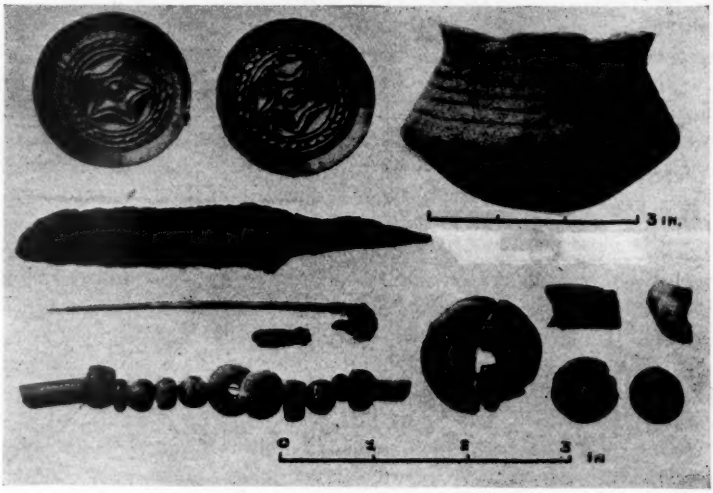


FIG. 3. Part of the contents of grave no. 11 (the upper scale is for the pot only).

was made of large stones laid flat, and some large pieces of Roman tile. Outside the flat stones there appeared to have been two definite alignments of stones set on edge. The outside measurement of the grave was 2·06 m. by c·74 m. (6 ft. 8 in. by 2 ft. 5 in.). All the Saxon graves were oriented with the feet slightly to the north of east.

The contents of these graves are not of striking character. In grave no. 11 (see figure 3), a woman's grave, the following objects were found: over the breasts two well-preserved gilt saucer-brooches decorated with a common five-point star design with a zigzag border, both with remains of iron pins; a long bronze pin with looped end to which now adheres some iron rust over the left

breast; along the outside of the upper third of the left femur a small iron knife; miscellaneous beads, three of amber including one large discoid example, two tubular of dark and light-blue glass, four of inlaid paste and four plain glass of different colours, and one of bronze, all grouped together over the pelvis close to the left forearm; two small Roman coins, one of Magnentius, the other of Constans, among the stones which covered the grave; lastly, by the head, a small hand-made vase of squat form with pronounced angle at the middle of the body, 70 mm. ($2\frac{3}{4}$ in.) high and 118 mm. ($4\frac{5}{8}$ in.) in diameter, decorated with a horizontal band of impressed chevrons and plain incised lines round the shoulder and with vertical incised lines on the lower half of the body, each of these latter lines starting from between low excrescences round the middle of the vase. Similar small accessory vessels are familiar from Anglo-Saxon interments elsewhere, as at Brighthampton, Fairford, and the like.

In grave 5, also that of a woman, was found only a pair of small 'applied' brooches, the 'applied' disc of plain bronze unfortunately in a very broken condition. Enough, however, remains to show that the design had a well-executed border of running spirals, suggestive of an early period of Saxon occupation, of which other signs have appeared among previous discoveries in the same cemetery.

Another larger pot, also hand made, of plain globose form, 140 mm. ($5\frac{1}{2}$ in.) high, and 140 mm. ($5\frac{1}{2}$ in.) in diameter, and without decoration, was unearthed.

Grave 24 had the appearance when first discovered of being a normal Saxon grave. Six flat stones and two Roman tiles lay on top. At a depth of 50 cm. below the surface we found the head of a pig, which appeared to have been severed from the body before being buried. Pottery and an oyster-shell were found below this level, but hardly any above the skull. Other fragments of a pig's skeleton, including the tibia, were met with, mostly under the head. Apparently a similar find was made in the Anglo-Saxon cemetery at East Shefford,[1] but neither the type of animal buried nor the disposition of the bones is stated. From a careful examination of the grave it would appear that the pig's head was placed in position and the stones and tiles placed carefully on top. That the labour of this operation should be undertaken without specific purpose seems unlikely. The suggestion that appears probable is that in the absence of a corpse the usual funeral ceremonies had been gone through, including the funeral 'wake', and that the remains of animals had been

[1] H. Peake and E. A. Hooton, *Journ. Royal Anthrop. Institute*, xlv (1915), 92.

buried in the grave as usual. It is not so much a case of substituting a pig for a man, as of making a cenotaph for the absent corpse, though it may have been a case of substitution. At the west end of the grave, but not under the stones, the frontal bone of a cow was found together with some calcined osseous fragments, whether animal or human it was impossible to determine.

Of the two Saxon graves without insignia one was the tomb of a child. The Saxon graves were much scattered, and it was only by prolonged digging that any were discovered.

It would seem that the part of the cemetery explored differs to a certain extent from the part examined by Rolleston. He named five classes of interments: (1) Roman leaden coffins, (2) cheaper Roman burials, (3) Anglo-Saxon cremations, (4) shallow, unoriented Anglo-Saxon graves independent of, and often above, their predecessors, (5) deeper oriented Anglo-Saxon graves with stones set round the body.

No burials of the first class were found. In the second class Rolleston states that stones do not appear to have been set along the sides of the graves. We found, however, in certain graves which we had no reason to suspect were not Romano-British, that stones had been set on edge beside the body, normally either at the head or beside the lower part of the leg (e. g. 18). One grave, almost certainly of Romano-British date, had a layer of stones lying on top or mixed up with the body. We were able to confirm the fact that aged skeletons preponderated. According to Rolleston the number of the sexes was unequal, 48 male, 34 female were recognized; in our part, 13 male, 12 female were discovered. These numbers do not confirm Rolleston's theory that one part of the cemetery was reserved chiefly, but not exclusively, for those of one sex. A point on which considerable stress should be laid but which is not commented on by Rolleston is the contrast between one group of persons and a second. There is evidence on anatomical grounds for suggesting that we have a class of people, possibly hewers of wood and drawers of water, who, instead of sitting on chairs or reclining on couches, habitually sat on their haunches, as all except the most civilized do to-day, and possessed other features which suggest a primitive type. In contrast to these menials we have a more refined and modern type. It is not always possible to classify the bodies, but as a general rule the distinction is very clear; it is one that is due to habit of life rather than to racial differences.[1]

[1] In order to test the question of racial differences observations have been made on some Oxfordshire villages. As far as our present evidence goes it would appear

I do not feel confident that all the Roman graves belong to the same period. Nos. 30, 31, and 27 were probably disturbed to make way for three new graves; the soil, also the bones, although thoroughly broken, had been replaced with apparently a certain amount of care. It is impossible to say how long a time had elapsed between the making of the earlier and later graves. No direct evidence is available from archaeological data.

Rolleston's three classes of Anglo-Saxon graves do not seem to correspond with those found this year. We found no traces of cremation burials, with the possible exception of a small cist; no unoriented Saxon burials were found, and the oriented Saxon burials with stones set round them were extremely shallow. Lastly, Roman and Saxon graves were entirely distinct. As there is little doubt that the cemetery was in use over a long period, it would seem probable that chance led different excavators to parts of the cemetery which happened to have been in use at different times.

Discussion

Mr. Leeds congratulated the author on the thorough manner in which he was continuing the work of Professor Rolleston. The most interesting discoveries made half a century ago were the variety of the interments and the presence of Anglo-Saxon cremation. Half a mile from the site, on the road to Faringdon, traces of a Roman bath had been found, and there had probably been Romans at Frilford from the first. Their graves in the cemetery were probably not obliterated when the Saxons came; and there was archaeological evidence that the interval was inconsiderable. Two cruciform brooches, of a rare type in the Saxon area, had been given by Rolleston to Cornell University; and specimens had also been found at East Shefford,[1] fourteen miles to the south. It was reasonable to suppose that the Saxons derived certain forms of ornament from Roman models still accessible on their arrival. The Oxfordshire Archaeological Society had begun excavating at Woodeaton, and hoped to explain

that the racial type existing in Frilford in Romano-British times still survives round Oxford to-day. One or two of the villages show less variation than the Frilford material, but the general type has certainly not changed. The bones from Frilford do, however, show some differences which are not to be observed in the modern bones. These differences are of an anatomical character and refer to the leg and ankle. Some of the Frilford bones of this part of the body can hardly be distinguished from modern; others again do differ very considerably, and form the 'primitive' type referred to above. All the bones suggest evidence of considerable muscularity, and some of the men probably possessed a fine physique. On the whole, however, as far as our present evidence goes—all the bones have not yet been thoroughly examined—apart from the habit of squatting and eating hard food the old inhabitants of Frilford do not appear to have differed intrinsically from the modern people of the neighbourhood.

[1] *Journ. Royal Anthrop. Inst.*, xlv, 112, pl. iii.

the landmark called 'the flowery floors' in a charter by the discovery of a Roman mosaic pavement. The brooches exhibited were of familiar types, and he thought that the 'applied' brooch, which in the present case had a single ring of spirals, was the prototype of the solid saucer-brooch with which it was often associated.

Mr. REGINALD SMITH observed that the Roman burials at Frilford, which lay east and west with the head at the west end, were late in the period and probably Christian, which would account for the absence of any grave-furniture.

The PRESIDENT said the excavations had been carried out with the scrupulous care demanded by modern standards of research. Though the yield was not imposing, it was not generally realized how much observation was required to distinguish in the earth such small and delicate antiquities. The Saxons had evidently been to some extent in touch with Roman civilization, as the frequent discovery of pierced coins in the graves bore witness. He was glad to hear complimentary references to Professor Rolleston, whose partnership with the late Canon Greenwell had resulted in the publication of *British Barrows*.

Palaeolithic implements found in Sweden

By Oscar Montelius, Hon. F.S.A.

The ingenious and persistent researches of the Swedish geologist, Baron Gerard de Geer, have taught us when the last Ice Period came to an end here in the north.[1] The ice began to melt and retire from the southern coast of Scania 15,000 years before our time. There cannot be more than an error of a few centuries in this calculation.

But the southern border of the enormous ice-masses covering the north of Europe in the last Ice Period was not on the south coast of Scania; it lay farther south, in Brandenburg. It is uncertain what length of time was necessary for the ice to retire from Brandenburg to Scania. However, if we consider how slowly the melting was going on in the first millenniums, and how long it took for the ice to melt in the southern part of Sweden, it is highly probable that about 5,000 years were required to transfer the ice border from its most southerly point to Scania. Consequently, the beginning of the melting period in our northern region, i.e. the end of the last Ice Period in northern Europe, must fall about 20,000 years before our time.

Now the end of the Ice Period in north Germany was evidently contemporary with the end of the Ice Period in central Germany and France. In this way we find that the end of the last Ice Period in central Europe falls about 20,000 years ago. This result is of a much higher value than the opinions formerly expressed on this problem. The result just stated may be taken as trustworthy.

The French and German archaeologists agree in the following results of their investigations regarding the later Palaeolithic age:

(1) The periods succeeded each other in this order:

Le Moustier period (*Moustérien*)
Aurignac „ (*Aurignacien*)
Solutré „ (*Solutréen*)
La Madeleine „ (*Magdalénien*)
Mas d'Azil „ (*Azilien*)
Le Campigny „ (*Campignien*), this being the transition period between the Palaeolithic and the Neolithic epochs.

[1] Gerard de Geer, *A Geochronology of the last 12,000 years*, in the *Congrès géologique international, Compte rendu de la XI^e Session*, Stockholm, 1910, p. 241. There the ice-melting in the most southern part of Sweden was not considered.

(2) The end of Le Moustier, or the beginning of the Aurignac period, corresponds with the end of the last Ice Period. The Aurignac period began about 20,000 years ago; and, as it probably lasted nearly 5,000 years, the Solutré period began about 15,000 years ago, or at the same time as the southern coast of Scania began to be habitable.

When the ice melted in Scania, plants and animals immigrated there, and with them came man. This was about 15,000 years ago, in the Solutré period. If we consider what has been already said, it is clear that the oldest implements that we can expect to find in Scania as souvenirs of man ought to be such as are contemporary with implements of the Solutré period found in central Europe.

Have we really discovered in that part of Sweden any antiquities similar to those of the Solutré period in central Europe?

Figs. 1 and 2 are two flint implements found in Scania, and fig. 3 is one of the Solutré period dug up in France. We see that they are all exactly of the same type.

In the Scandinavian Peninsula, such 'amygdaloid' flints occur only near the southern and western coasts of Sweden and Norway, just those parts of our peninsula that first became ice-free. Those flints prove that these parts of Scandinavia were already inhabited in the Solutré period, and this result has been confirmed by other discoveries.

In Denmark a spear-head of flint (fig. 4) was discovered under circumstances indicating that it dates just from the time when the ice was melting. Such spear-heads are not known from any other part of the Stone Age here in the north, but in France flint spear-heads of the same shape (figs. 5 and 6) were used in the Solutré period! Lately similar flints have been found also in Norway on the western coast, and the circumstances of the discovery prove that they also belong to a very remote period.[1]

The Solutré period was followed, as we know, by the Madeleine period, which is characterized by the preponderance of bone weapons. In the period following the age of 'amygdaloid' flints in Scandinavia the preponderance of bone weapons is also evident. Another characteristic feature of the time following the Solutré period in central Europe is that many very small flint flakes ('microliths', see fig. 7) have been discovered. In Scandinavia, and especially in Sweden, have been found a great number of spear-heads of bone with small flint flakes inserted (fig. 8). Many of them have been well preserved in peat bogs. All this

[1] *Oldtiden*, IX (Kristiania, 1920), p. 146.

indicates the same evolution in the Scandinavian region as in central Europe during the Madeleine and Mas d'Azil periods.

In the next period we have also the same types in both regions. In central Europe the Mas d'Azil industry was succeeded by

FIG. 1. Palaeolithic flint implement, Scania (½).

FIG. 2. Palaeolithic flint implement, Scania (½).

that of Campigny, characterized by such flints as fig. 9. The same type (fig. 10) is common here in the north during the Shell-mound period which represents the transition from the Palaeolithic to the Neolithic Period, just as the Campigny period does in central Europe.

A most interesting question is: Do we know anything about the human race immigrating into Sweden after the end of the Ice Period?

The only race living in Central Europe then and several milleniums afterwards, down to the end of the Palaeolithic Period, was the dolichocephalic Cro-Magnon (or Aurignac) race. And we understand that the first man that came to Sweden, hunting the reindeer and other animals following the retiring ice-border, must have come—like the plants and animals—from central Europe. Consequently, it is evident that the race immigrating into Sweden, the first occupants of our country, must have been a dolichocephalic race. After that time we can find no trace of any new immigration to the Scandinavian region entitling us to speak of a new people supplanting the old. And when we begin to find human skeletons with skulls well enough preserved to be studied the great majority of them are found to be dolichocephalic, and of the same fine type as the Cro-Magnon race on one side and present-day Swedes on the other.

FIG. 3. Flint implement of Solutré period, France ($\frac{1}{2}$).

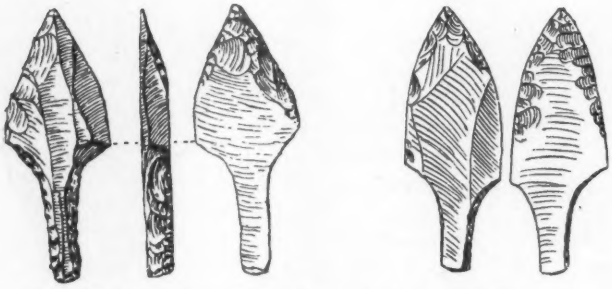
These facts have convinced me that the first immigrants here after the end of the Ice Period were our ancestors. If it is so, then the names of lakes and rivers in Sweden ought to be of Scandinavian (Germanic) origin. And that is just the case. Professor Hellqvist, of the University of Lund, examined those names some years ago, and found that all names of Swedish lakes belong to our language.[1] Therefore I may assert that our ancestors were the first invaders of Sweden. Their descendants are the actual Swedish people. We have ourselves 'made our country', have cultivated it and made it habitable. Our pedigree is a very fine one!

[1] Elof Hellqvist, *Studier öfver de svenska sjönamnen, deras härledning och historia* (Stockholm, 1903–6).

This result is of great interest to Swedes now living; but it is of a certain interest also for other peoples.

Let me not be misunderstood. I do not say that a Germanic people [1] invaded Sweden 15,000 years ago, but that our ancestors

FIG. 4. Spear-head of flint, Denmark ($\frac{1}{1}$).



FIGS. 5 and 6. Spear-heads of flint, Solutré period, France ($\frac{1}{1}$).

came then. At that time no German, no Celtic, no other Aryan race existed. During the many thousands of years that elapsed after the Ice Period, the inhabitants of the Scandinavian countries and the northern part of Germany, like the inhabitants of western and eastern Europe, all being descendants of the tribes living in the

[1] By Germanic people I do not mean the people inhabiting Germany, but the race that included the inhabitants of all Scandinavian countries and Germany, as well as the Anglo-Saxons.

Ice Period, have by a most natural evolution, and as a consequence of living under different circumstances, become Germanic in the north, Celtic in the west, and Slavonic in the east. All these and most of the other peoples of central and southern Europe

FIG. 7. Small flint flakes (microliths), Mentone ($\frac{1}{1}$).

FIG. 8. Spear-head of bone with flint flakes inserted, Sweden ($\frac{1}{2}$).

FIG. 9. Flint implement, Campigny period, France ($\frac{2}{3}$).

FIG. 10. Flint implement, Sweden ($\frac{2}{3}$).

speak Aryan languages, and are considered to belong to the same great Aryan race.

If it can be proved that one of these groups, the Germanic, living in the most northern part of Europe, is descended from tribes of the Ice Period and consequently of European origin, then it is highly probable that the Celtic, Slavonic, Italian, and

Greek groups are also of European origin. The Aryan groups existing in Asia—the Persian and the Indian (Hindu)—are also probably of the same origin, having emigrated from Europe to Asia a long time ago. In other words: the Aryan race must be of European origin, not Asiatic.

We know of two Ice Periods here in the north, and some geologists speak of more than two such periods in central Europe. Here I have considered only what happened after the end of the last Ice Period. A most interesting question is: do we know of any traces of inhabitants in the Scandinavian countries before the last Ice Period, i.e. in the interglacial period?

Seeing that the ice swept away almost everything, as the glaciers are doing to-day, such traces can hardly be expected. However, some interglacial deposits having been discovered in the southern part of the Scandinavian region, it is not impossible that some traces of interglacial man also may be found. A few flints have actually been met with in these deposits, but it is not perhaps certain that they were worked by man.[1]

[1] N. Hartz, *Bidrag til Danmarks tertiære og diluviale Flora* (København, 1909), p. 202.

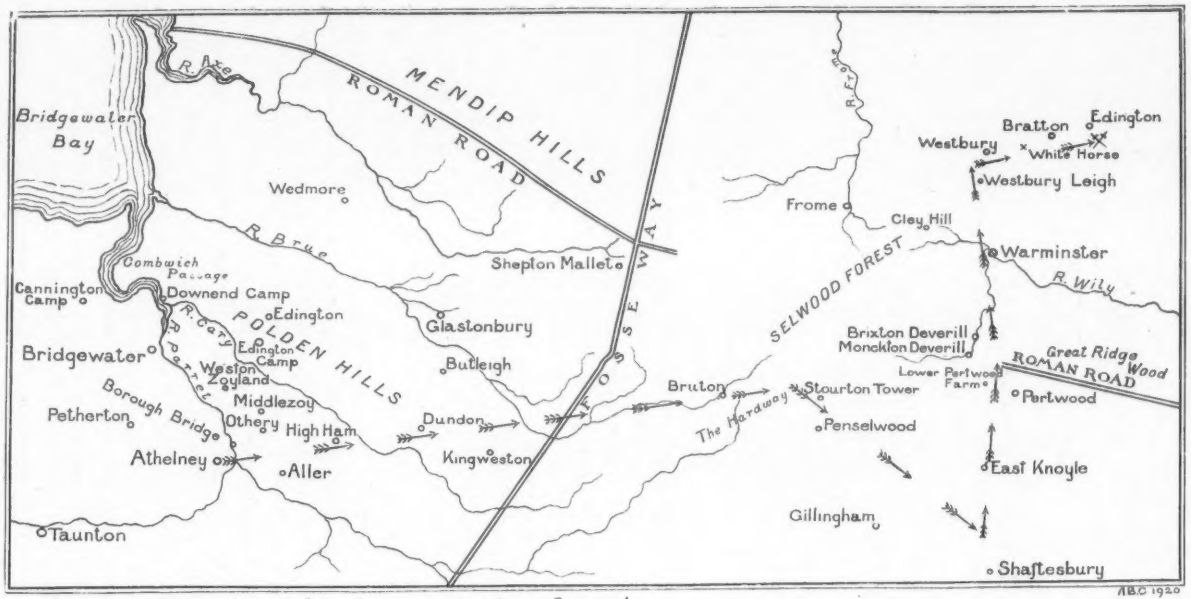
On the Site of the Battle of Ethandun

By E. A. Rawlence, F.S.A.

Three places are now recognized as possible sites of the battle of Ethandun: Edington, on the Polden Hills in Somerset; Edington, near Westbury in Wiltshire; and Heddington, about six miles south-east of Chippenham, also in Wiltshire. The object of the present paper is to endeavour to disprove the possibility of Edington on the Polden Hills being the scene of the battle, and to show that an overwhelming mass of evidence favours Edington, near Westbury.

The latest and most complete argument in favour of the Polden Hills as the site of the battle is to be found in Messrs. Whistler and Major's *Early Wars of Wessex*. After a careful examination of the evidence and of the topography of this site, I am of opinion that the plan of campaign suggested by these authors is most unlikely, if not altogether impracticable, from a military point of view.

The composition and situation of the two contending armies in the spring of 878 seem to have been as follows. The Danes were a very mobile force, as they were mostly mounted. Guthrum had made a rapid march from Cambridge to join an army of foot soldiers which were about to land at Wareham. These forces had been defeated by Alfred on sea and land in 876, but 'the mounted force stole away from the levies by night and went to Exeter', where it wintered. In the spring of 877 the army left Exeter, and in the early autumn of that same year raided Mercia. Then 'during mid-winter after twelfth night the army stole away to Chippenham and over-rode the West Saxons' land and there settled. And many of the folk they drove (by force of arms and through need and fear) over the sea, and of the remainder the greater part they brought under their sway, except Alfred, and he with a small band with difficulty fared through the woods and moor fastnesses.' Thus the Saxon Chronicler; and Asser is equally clear: 'And at that time King Alfred, with a few of his nobles and some warriors and vassals besides, led an unquiet life in great tribulation in the woodland and marshy parts of Somerset.' It therefore seems indisputable from the authority of the contemporary historians that the king and his followers were few in number and in no way capable of resisting the Danish host, which had then probably been strengthened by the remnant of Hubba's army that had survived the defeat by Odda at Cynuit. There can be little doubt



Approximate direction of Alfred's suggested line of march shown by arrows.

FIG. 1. Sketch-map of the district covered by Alfred's campaign.

that the Danes could at that time put into the field thousands to Alfred's hundreds, and yet we are asked to believe that Guthrum was held up on the Polden Hills between Easter and Whitsuntide unable to move, and in the meantime was making most elaborate dispositions in order to crush Alfred's hunted band. Further, there is nothing in any of the early Chronicles to indicate that the Danes even knew of the king's hiding-place.

It is further suggested that the Danes camped on a site in the Polden Hills because it afforded the best position to overlook Athelney and ultimately to attack Alfred's stronghold. No military commander could have chosen a worse base from which to attack, as he would have had to cross about six miles of water-logged moorland; not moorland of rich pasture such as now, with well-cleansed dykes to drain off the surface water and embankments to keep the tidal waters within bounds, but a swamp of reeds and rushes mostly covered with water at spring tides, with the small islets of Weston Zoyland, Middlezoy, and Othery cropping out above the alluvial morass. Under such conditions it would obviously have been impossible for a mounted force such as that of the Danes, and most difficult for a large body of foot, to cross the marshes, especially in the late winter or early summer when this campaign took place. An examination of the Geological Survey maps makes it clear that any military commander wishing to attack Alfred in Athelney would undoubtedly have made his main camp at High Ham or Dundon Hill, which are infinitely stronger positions than Edington camp and far better situated for an attack on Athelney, to which they are much nearer. From either of these vantage grounds high and rocky land exists nearly down to Borough Bridge camp, which is only a mile from Athelney. The attacking force could then have followed the high ground through Langport to the south of Athelney, and thus Alfred's small force would have been hopelessly bottled up and compelled to surrender. At the same time the occupation of Dundon Hill would have commanded the great Fosse Road and have prevented help coming to the king from the north and east. We are, however, asked to believe that this all-important position was left unoccupied; yet its importance is so obvious to the authors of *Early Wars of Wessex* that in their hypothetical campaign it is suggested as the first point of vantage seized by Alfred when he issued from his place of refuge (pp. 163–4).

Another strong argument against the Polden Hills site is the statement of Asser that there were three causes which brought about the final surrender of the Danes, 'hunger, fear and cold'. Now if, as is presumed by the authors of *Early Wars of Wessex*,

the Danes, when defeated at Edington, retired to Downend camp, which is at the extreme west end of the Poldens and adjoins the mouth of the river Parret, it is practically impossible that either hunger or cold could have helped to bring about the surrender. If the Danes had been encamped for at least seven weeks at Edington, making their great preparations for an advance on Athelney, they would surely have collected some ships in the Downend Pill which adjoins the camp there, and could therefore have used these after their defeat either as a means of supply or of escape. It should also be borne in mind that the battle was fought about Whitsuntide, the surrender taking place fourteen days after. As Easter in 878 fell on March 23rd it would bring the date of the surrender well into the last week in May. Now, as the highest part of Downend camp is only 25 ft. above sea-level, and as this district is one of the mildest and earliest in the west of England, it is difficult to conceive how cold at that time of the year could have been a factor in the surrender of the Danes.

Chapter 3 of *Early Wars of Wessex*, entitled 'The Battle of Ethandun and the Peace', contains a description of the hypothetical lines of the battle. It is admitted that the Polden Hills consist of a narrow ridge, flanked on either side with impassable marshes except during neap tides, and with the western extremity resting on the Parret at Downend camp. It is suggested that Alfred camped the night before the battle at Butleigh, which is identified with the Aecglea or Iglea of the Chronicles, and that he won his victory by a surprise attack on the following morning, when he drove the Danes westward before him until they were cornered in Downend camp, where, after a siege of fourteen days, they surrendered from the effects of 'hunger, fear and cold'. From this position it is stated that 'the only way of escape from the end of the Poldens was through Alfred's hosts and so back to the Fosse Way' (p. 165).

A careful examination will show how unlikely the whole of this theory is. In the first place an astute leader, such as Guthrum had proved himself to be, with so large a force of horse at his disposal, would hardly have allowed his army to be surprised and bottled up in the way suggested. Secondly, bearing in mind that numerous bodies of Danes from the outlying forts would be constantly arriving—and no doubt messengers from the fighting men at the Edington camp would be continually passing to and from the hill camps on the edge of Salisbury Plain, carrying messages or bringing in supplies, all of whom must have passed through Street or Butleigh—it is inconceivable that Alfred could have brought up his large force and camped within seven or eight miles

of the enemy overnight in sufficient secrecy to make a surprise attack the next day.

Thirdly, it is assumed that Alfred drove the Danes westward, where all means of escape were cut off and they were starved into submission. If Guthrum and his forces had really been encamped for several months on the Poldens there would undoubtedly have been a considerable fleet of Danish ships congregated in the Parret estuary. This fleet and the assistance of the tidal ford at Combwich would, as already pointed out, have afforded a ready means both of escape and of providing supplies.

Lastly, the authors of *Early Wars of Wessex* in considering the respective sites make some startling geographical errors in the distance of Athelney from the Wiltshire sites and in the points of the compass. As these errors are used as arguments in favour of the Polden site on account of the brevity of Alfred's lightning campaign it is necessary to correct them. On page 149 it is stated that 'it is impossible to read into the history any incidents which justify belief in bases of operation sixty or more miles apart across forest country'. As a matter of fact Athelney is as the crow flies under forty miles from the Wiltshire Ethandun, and it is very little more by existing roads. This error is repeated on pages 153 and 157. On page 162 Butleigh is stated to be 'twenty-five miles from the Selwood gathering-place', which elsewhere is identified with Stourton tower. These two points are less than fifteen miles apart as the crow flies. On page 206 'the distance about seventy miles from Athelney' of any Wiltshire site is stated to be 'too great to allow of the constant fighting recorded, and this objection is insuperable', but as the true distance is about forty miles it would not appear to be 'insuperable'. Also on page 157 it is stated that there were two points which overlooked Athelney and Borough Bridge, viz. 'High Ham south of Athelney and the other the highest point of the Polden ridge to the eastward', i.e. Ethandun camp. As a matter of fact High Ham is due east of Athelney and Ethandun due north, and from the Danes' inability to occupy High Ham to the south of Athelney, and thus enable the 'co-operation with a ship force', it is argued that it was necessary first to force the stronghold of Borough Bridge. Now as High Ham is well to the east of Borough Bridge there was obviously nothing to hinder Guthrum from occupying it, and it is inconceivable that any skilled leader would not have occupied such positions as High Ham and Dundon Hill, since to have done so would have immediately cut off Alfred's means of communication with the north and east.

The plan of campaign propounded by Messrs. Whistler and

Major is thus seen to be improbable. An attempt must now be made to prove that a more probable and better-devised one can be traced in favour of the Wiltshire site.

Alfred's condition during 877 and the early part of 878 seems to have been forlorn in the extreme. The Saxon Chronicles state that 'he with difficulty fared through the woods and moor-fastnesses', whilst Asser states that 'at that time King Alfred, with a few of his nobles and some warriors and vassals besides, led an unquiet life in great tribulation in the woodland and marshy parts of Somerset'. If there is any truth in the traditional burnt cakes, his identity was not even known at Athelney. He probably remained in this condition until the great victory of Odda over Hubba at Cynuit heartened him and his loyal thanes sufficiently for him to organize his subjects to the south and east of Salisbury Plain, on the confines of which the Danish occupation seems to have ceased. Henry of Huntingdon confirms this view when he states 'King Alfred then, comforted by this victory', etc. The Chronicles proceed 'therefore at Easter King Alfred with a little band wrought a work at Athelney, and from that work, with part of the Somerset men which was nighest thereto (nobles and vassals) waged war untiringly against the army'. This probably refers to the entrenchment of the Borough Bridge camp as Alfred's first move. This hill, locally known as the Mump, is a remarkable cone rising abruptly out of the marsh. John of Wallingford states that 'his men being on every side recovered, Alfred occupied the hill fortresses and fortified the places which were difficult to pass, and closed the way to the enemy'. The most probable meaning of this passage is that Alfred, when he felt himself strong enough, issued forth from Athelney and Borough Bridge and occupied High Ham and Dundon Hill, and probably that Odda, with whom Alfred would have had easy communication by the ridge of high ground through the Lyngs and North Petherton, crossed the Parret from Cannington camp at the tidal ford at Combwich and occupied the Polden Hills. Such a move would have effectually cut off Guthrum from any further assistance from a Danish fleet in the Parret estuary and would at once have disclosed to Guthrum the seriousness of Alfred's intentions. John of Wallingford states that 'Guthrum, realising the danger of the situation, summoned from all parts the men who had settled in England and had occupied fortresses in the hills, ordering them to quit these and join the army. He saw that there was danger in delay, as the king's army increased in strength daily. Wherefore he also drew together a large force.' Now, assuming that Guthrum was encamped at Edington near Westbury and that King Alfred was occupying the

fortresses on the edge of the Somerset marshes, it is obvious that Guthrum could have drawn his reinforcements from the north and east, which were under his control, whilst Alfred would have drawn his from the south-east and west, which was apparently free from Danish occupation. Thus each leader would have collected his forces without these reinforcements coming in contact with each other. This would obviously occupy some time, and probably much happened between Alfred's departure from his Somerset stronghold soon after Easter and the time when the Chronicles take up the history at the gathering at 'Ecgbryht's Stone'. This hiatus can, however, be filled up by local site-names and traditions which will now be traced.

The conspicuous landmark known at Stourton Tower traditionally marks Alfred's camping ground after he left Athelney, and Henry Hoare about 1766 erected the tower to commemorate the event. The old trackway known as 'the Hardway', a steep ascent from the west passing close to the tower, is still known as 'Kingsettle Hill', whilst the wood immediately to the north is called 'King's Wood'. The Hardway, one of our oldest British trackways running east and west, after passing through the Selwood Forest, crosses the Mere Downs and thence goes through Chicklade Bottom eastward. Until the advent of the railway this trackway was the great thoroughfare by which fat stock from the Somerset grazing lands went to the London and eastern markets. Graziers brought their cattle over this trackway to the old inn which formerly existed at Chicklade Bottom, where they met the up-country dealers, who took the beasts over and drove them to their various destinations. My father could remember these transactions.

As objection may be taken to the acceptance of these old traditional place-names, I here give an extract from Hoare's *History of Wiltshire* wherein Sir Richard Colt Hoare justifies his acceptance of this traditional site. 'The cause of this spot being selected for such a Memorial arose from the name of this hill being "Kingsettle" and therefore supposed to be the spot where Alfred, after quitting his solitary retirement in Athelney, first met his adherents, who flocked to him, from more southern and eastern countries, to join his standard. I am, in general, no friend to *conjecture*, especially in matters of history, which require facts to substantiate them; but as I have strong reasons to suppose that a very ancient British way led down from this hill from Wiltshire into Somerset, and as this is the direct line to Petra Ecbricti or Brixton Deverill, where Alfred halted his army the first night, I shall not, I trust, be deemed fanciful as to the derivation of the modern name of Kingsettle hill.'

I now venture on a bold suggestion that Alfred's next move was not to the 'Petra Ecbricti' but to another entrenched camp about two miles north of the town of Shaftesbury to which the same place-name and traditions attach. Alfred had a great affection for Shaftesbury, as is witnessed by the magnificent abbey which he built and endowed there soon after his victory, and of which he appointed his daughter Aelgiva the first abbess. This move would have necessitated Alfred's passing through the south end of Penselwood Forest and across the Gillingham Forest, both of which would have screened his movements.

When all arrangements had been completed the king marched due north with an increased army by the road which runs through East Knoyle, Pertwood, and the Deverills. This road running from south due north is probably one of the oldest trackways in England. It starts at Poole Harbour, passes to Badbury Rings and Busbury camp near Blandford, and runs along the western edge of the chalk hills which form the eastern barrier of the Blackmore Vale to Shaftesbury and then northward to Warminster. One great feature of Alfred's concentration appears to have been his use of this road running from the south to the north almost directly to the Danish lair at Edington, and the utilization of the roads which cross it from west to east at various stages to pick up his reinforcements. Thus whilst at Kingsettle near Shaftesbury he would have gathered his levies from Poole, Wareham, Blandford, etc., to the south, and also from the west and east by the Sherborne and Old Sarum road which passed through Shaftesbury. That this is a very old road is proved by the fact that a portion of it in East Stour parish is still called 'the Sherborne Causeway', thus indicating a very ancient if not a Roman origin. Many Roman coins have been found on the Castle hill on the west side of Shaftesbury, which indicate a Roman occupation, and I know of the site of two Roman villas at Sherborne.

Alfred's next camping ground was at Ecgbryht's Stone. This was evidently a prearranged trysting-place, as Asser records that 'when the king was seen, receiving him as one returned from the dead after such tribulation they were filled with boundless joy and there they camped for one night'. It is obvious from this that the various contingents, which the Chronicles state came from 'all Somerset and Wiltshire and of Hampshire that part which is on this side of the Sea', had already arrived and were waiting to welcome the king. He apparently harangued the assembled army immediately on his arrival and rested there one night and then pressed forward.

A point of the utmost importance is the identification of Ecgbryht's

Stone. Asser records that it 'is in the eastern part of the wood which is called Selwood'. Sir Richard Colt Hoare identified the site with Brixton Deverill, which fits in admirably with the suggested line of march, but as Sir Richard's identification was based on the fact that, according to Domesday, Brictric held Deverill in 1066, it can hardly be considered as proof of the name being in use nearly 200 years earlier. I would venture to suggest a derivation more sound chronologically and more in conformity with the name Ecgbryht. In Geoffrey of Monmouth's *History* (bk. xi, chap. 2), amongst the leaders who perished with Modred in the battle in Cornwall against King Arthur, is one named Egbrict. Although too much weight must not be placed on Geoffrey of Monmouth, it may perhaps be assumed that Egbrict was an early British name. As Brixton Deverill is well within Arthur's alleged sphere of activity, it is possible that a British chief of this name may have held possessions in this district and thus have been the origin of the prefix.

It is now necessary to show that Asser's statement as to the position of Ecgbryht's Stone is correct, as Brixton Deverill is now six miles east of the nearest existing remains of the forest. This point is proved by Sir R. Colt Hoare, who quotes documents to show that Hull or Hill Deverill, which lies to the east of Brixton Deverill, was situated within the bounds of this extensive forest. If this can be assumed, it is of the utmost importance in proving the true site of the great battle. The authors of *Early Wars of Wessex* state that 'the exact position of Ecgbryht's Stone we may leave for the present as there is no question but that it is known within a few miles, and is probably well represented by Stourton tower raised to commemorate Alfred's doings'. If the true site of Ecgbryht's Stone can be shown to be eight miles east of Stourton Tower it places the great rendezvous of Alfred's army twenty-three miles east of Butleigh, the alleged camping ground of the army on the following night. It would obviously be impossible for Alfred to have moved his army, which was probably composed to a large extent of infantry, such a distance through Selwood Forest and the low lands beyond in twenty-four hours and then have had it in a fit condition to move forward again another nine miles westward early in the following morning along the Polden Hills to make the surprise attack on the Edington camp. The site at Brixton Deverill, however, is an easy march of six miles to Cley Hill or nine miles to Westbury Leigh, the two suggested sites of Alfred's last camping ground. The south end of Brixton Deverill parish, known as Lower Pertwood Farm, affords many facilities for such a rendez-

vous, mainly because the important Roman road, which runs from Uphill at the mouth of the Axe along the Mendips through Great Ridge and Grovely woods to Old Sarum, crosses this farm just north of the homestead, as is shown on the Ordnance Survey maps. The Chronicles state that at Ecgbryht's Stone 'came to meet him all Somerset and Wiltshire and of Hampshire that part which is on this side of the sea'. Now by this Roman road the Somerset men would have arrived from the west, and from the east would have come the Wiltshire and Hampshire contingents. At Old Sarum this road branched out into three, the northernmost going to Marlborough, the central one to Silchester, and the eastern to Winchester. It is probable that another ancient way went in a more southerly direction through the New Forest to Christchurch, thus gathering all the Hampshire men from 'that part which was on this side of the sea', by which the Solent was probably meant. Could a better trysting-place for this fine military move have been found? Selwood Forest on the west would have screened the movement of the Somerset forces, and Grovely and Great Ridge woods would have done the same for the Hampshire and Wiltshire contingents for miles. Further, Lower Pertwood itself is a large basin-shaped tract of down-land admirably adapted to conceal the concentration of a large body of troops, and the numerous banks, indicating old enclosures, which are still visible on the down-lands evidently show that this site was at an early period very heavily occupied.

On the following day the whole army moved forward. The reasons for Alfred's short stay at Ecgbryht's Stone are obvious, as he was only about ten miles from the lair of the Danes at Edington. The next camping ground was Aecglea or Iglea, which was the last halt before the great battle. By those who accept the Wiltshire site of the conflict this name is generally considered to represent either Cley Hill in the parish of Corsley, a remarkable conical outlier of the chalk rising to a height of 800 ft., or Leigh, a tithing of Westbury. The Cley Hill is a very conspicuous and bare feature in the landscape and quite visible from the hills near the Bratton camp just above the White Horse near Westbury, so that apparently it would not have been consistent with Alfred's aim of effecting a surprise attack to have exposed his men with their camp-fires on this bare height. The Westbury Leigh site, on the other hand, was probably then in a wooded area in the vale and possibly provided another of those cross-road connexions such as the king had used at Shaftesbury, the Hardway, and Brixton Deverill. There must almost certainly have been a roadway communicating between the important Roman centres of

Bath (Aquae Solis) and Old Sarum (Sorbiodunum), and if so it would probably have followed this line, thus passing through Westbury and Warminster and connecting up with the great highway already referred to somewhere in Great Ridge or Grovely. In this way Alfred would have picked up belated levies from north Somerset and Hants and Wilts., who would have been warned of the intended departure of the army from Brixton Deverill and would have been thus deflected northward to Leigh.

Just north of the hamlet of Westbury Leigh is a farm called Penleigh, which may be Alfred's final camping ground. If so, as it is only about four and a half miles west of Danesley (the supposed Danish camping ground near Edington) and outside the drift of Guthrum's reinforcements and camp followers, it would have provided Alfred's men with an admirable jumping-off ground for the surprise attack early on the following morning, after they had had a few hours' rest.

We now come to the crucial point, the site of the battle (fig. 2). Just to the east of the village of Bratton there is a very remarkable combe in the chalk hills which has an area of fairly level land in the bottom on the greensand formation, but the chalk hills rise around it in an unusually precipitous manner from about 350 ft. to the 600 ft. contour on the Ordnance Survey. To the south, on a knoll overlooking the vale of the Bath Avon, is the Bratton entrenched camp at a height of 746 ft. above sea-level. In the north-east corner of the combe called Luccombe Bottom a copious spring of most excellent water issues from the greensand at the base of the chalk hills. Thus this site affords an exceptionally fine camping ground, screened from the wind on every side and with an abundant supply of purest water. That this was the site of Guthrum's camp seems possible, as it is called Danesley to this day. The site renders a surprise attack peculiarly easy as, if the Danes in a false sense of security had failed to picket the high ground round their camp, Alfred and his men could have surrounded the rim of the combe and thus have fallen upon the camp before the Danes were aware of the proximity of the Saxon army.

It is clear from all accounts of the battle that the first great struggle took place in a position outside the fortified camp, and that when the main Danish force had been broken up, such units as were able fought their way into the entrenched camp, where they were besieged for fourteen days before they surrendered under the stress of 'hunger, fear and cold.' Bratton camp is 746 ft. above sea-level and exposed to the sweep of the north and east winds from Salisbury Plain, so that cold may have been one of

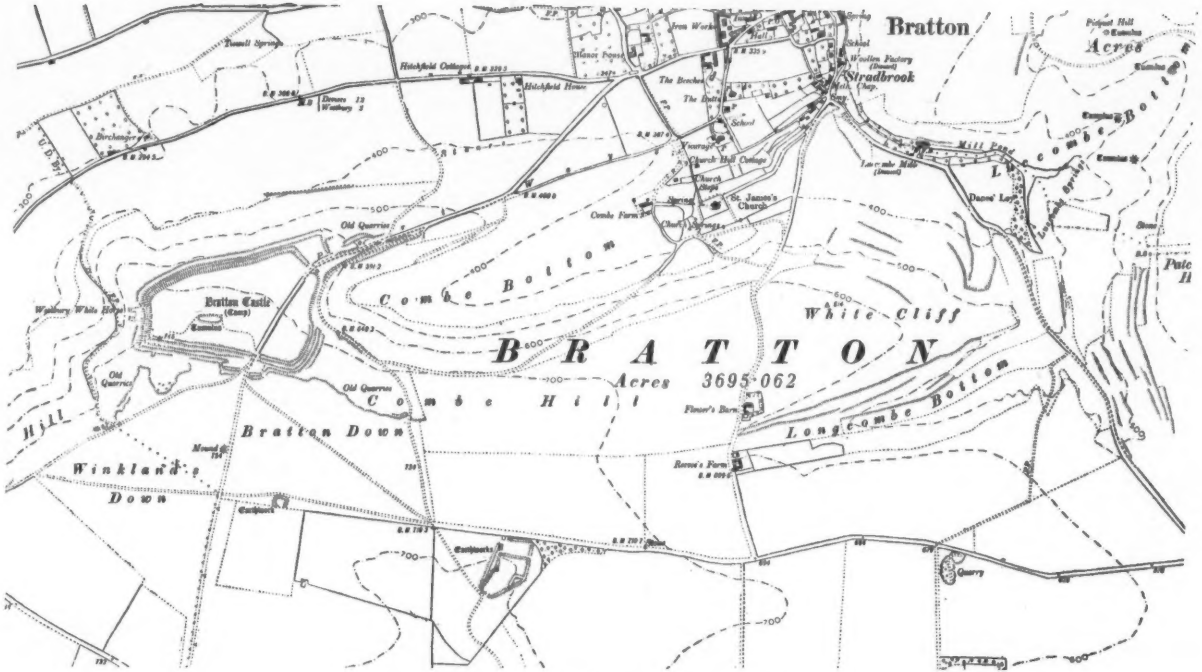


FIG. 2. Map of the district round Bratton Castle.

Reproduced from the Ordnance Survey Map by permission of the Controller of H.M. Stationery Office.

the causes of the surrender of the Danish army, even at the end of May, and its isolated position made supply impossible unless the camp had been heavily provisioned beforehand.

There is one other point that remains to be dealt with, that is the conversion of Guthrum and thirty of his chief men from Paganism to Christianity. Their public acknowledgement of Christ in baptism took place, according to the Chronicles, at Aller three weeks after the conclusion of peace. Asser, however, gives the period as seven weeks, and surely no one should have known better than he, as he probably more than any one else would have had to prepare Guthrum and his companions for the sacred rite. The difference in the length of the interval is important, as the authors of *Early Wars in Wessex* in more than one place use the shorter period as an argument in favour of the proximity of the Polden site to Athelney and Aller.

If we accept Asser's statement that the baptism took place seven weeks after the victory, it leaves ample time for Alfred's court to have returned to Wedmore, where the preparation of Guthrum and his chiefs seems to have taken place, and for their journey across the Fens to Aller church. The probable reason for this procedure would be that, according to their usual custom, the remnant of Hubba's army, in passing up the Polden Hills to join their friends at Chippenham and Bratton, would have destroyed all the churches along their line of march north of the King's Sedgemoor. Hence Aller at the south-east corner of the moors would have escaped destruction and may have been the nearest available church.

I have now reviewed, I trust in a fair and judicial spirit, the two most generally accepted sites for this important battle, comparing the possibilities and probabilities of the suggested campaigns from a military, historical, geographical, and geological point of view. I have attempted to show that the campaign propounded by the advocates of the Polden Hills site is one that would not have done credit to the high military qualities which had hitherto distinguished Guthrum and his chiefs. On the other hand, the course suggested as followed by Alfred to the Wiltshire site discloses an extraordinarily well-planned lightning campaign wherein Alfred, after careful preparation, placed himself with his small forces upon an ancient road leading from south to north direct to the camp of his foes. Having secretly warned his loyal subjects to join his army by roadways running at right angles from east to west at certain specified points and dates, he then moved forward by rapid marches, picked up the various contingents as he progressed, and, falling unawares upon an over-confident foe, gained a glorious victory.

A reply to Mr. Rawlence's paper on the Battle of Ethandun

By Albany F. Major, O.B.E.

An attempt to rehabilitate the theory that the site of the battle of Ethandun was at Edington-by-Westbury was to be expected, and we welcome Mr. Rawlence's paper as the first attempt we know of to work out a Wiltshire theory of the campaign.

We are glad also to have an opportunity of admitting and correcting the errors as to distance and as to certain compass bearings pointed out by Mr. Rawlence. The former had already been brought to our notice by a Somerset friend. From Athelney to Edington-by-Westbury is just under forty miles, and from Butleigh to the Stourton tower less than fifteen, as stated by Mr. Rawlence, and the distances in *Early Wars of Wessex* should be amended accordingly. The errors, however, do not affect the argument. According to Asser and the Chronicle, King Alfred waged war from Athelney untiringly against the army, i. e. the main Danish force, and Ethelwerd speaks of daily battles. It is difficult to see how this could have been, had that army remained even forty miles away, and no supporter of the Wiltshire theory has yet explained this. Mr. Rawlence does not tackle the objection, and it may fairly be called insuperable.

As regards the compass bearings, High Ham lies slightly to the north of east from Athelney, Edington Hill nearly NNE., not due north as stated by Mr. Rawlence. Here again the errors do not affect the argument. We said nothing about the Danes' *inability* to occupy High Ham. Our argument is that the river Parret being the only channel by which a fleet could penetrate the marshes, and Downend the furthest point inland where ships could lie at the foot of the Poldens, being some twenty miles from High Ham by land, i. e. round the marshlands, effective co-operation between a land force at High Ham and a fleet at Downend would have been impracticable until the Borough Bridge fort, commanding the Parret, had been forced.

Admittedly from Twelfth Night till Easter 878 Alfred was in dire straits and forced to keep in hiding. But after Hubba's defeat the position changed, and when Alfred began to throw up a work on the conspicuous mount at Borough Bridge and to wage war against the army his whereabouts must have become known to the Danes. The remnants of Hubba's force are said to have

joined Guthrum, and the latter would naturally march west, when he heard of Hubba's fall, to meet any advance of the victorious Saxons ; he would find out what Alfred was doing, and would be compelled to keep Athelney under observation. As to the best point from which to do this, to Athelney from Ham Hill is a little over three miles, from Edington Hill some six and a half, and from Dundon camp nearly nine. A view of Athelney from the latter is masked by Ham Hill, and we do not know why Mr. Rawlence says it is much nearer Athelney than Edington Hill. Nor do we understand his statement that from High Ham or Dundon Hill high and rocky land exists nearly down to Borough Bridge. The unbroken marsh between Ham Hill and Borough Bridge is nearly two and a half miles wide, and nearly a mile and a half wide between Ham Hill and Othery, where it is narrowest. But the marsh between Borough Bridge and Edington Hill is broken by a chain of marsh islands, Othery, Middlezoy, Weston Zoyland, and Chedzoy, which gave Alfred comparatively easy access from Athelney to the mainland and offered a route by which the Danes might hope to storm their way into Alfred's stronghold.

This was not such an easy task as Mr. Rawlence seems to think. It took William the Conqueror six months, from April to October 1071, to capture Hereward's camp of refuge at Ely, and it is no reflection on Guthrum to suggest that he may have spent six weeks in preparing for a similar task.

According to our reading, Hubba's defeat at Cynuit Castle must have drawn Guthrum west to face this new danger, even if Alfred's position was not known to the Danes, and the landing at Parret-mouth was made in concert with an advance by Guthrum to take Alfred between two fires. The Saxon victory encouraged the king to abandon his concealment, and by raising a conspicuous work at Borough Bridge and waging a ceaseless guerilla warfare he forced Guthrum to fix his attention on the marsh stronghold. The Danish occupation of the Poldens enabled Guthrum to keep touch with the fleet at Downend and to cover the approach from Athelney along the islands, while he was preparing to attack by the same route.

His direct line of communication with his base at Chippenham would be along the Fosse Way to East Pennard, thence through West Pennard and Glastonbury to Street and the Poldens. The rendezvous of Alfred's army would need to be clear of this line and well away from, but within marching distance of, Guthrum's force. Mr. Rawlence is at pains to reassert the doubtful claim of Brixton Deverill to be the site, in order to advance a favourite

proposition of the Wiltshire theorists, that this place is not within marching distance of Edington-on-Poldens. As to this we have consulted eminent soldiers, and Mr. Rawlence clearly underrates the marching powers of British infantry. Before the battle of Talavera the 43rd, 52nd, and 95th Foot, who had just bivouacked after a march of twenty-four miles, were called on to advance another thirty or more, and completed the whole distance in twenty-six hours; and the Highland Brigade, on 17th February 1900, marched thirty-one miles in twenty-four hours, and attacked Cronje's laager at 7.45 a.m. on the 18th. Infantry nowadays, moreover, carry rifle and ball ammunition, pack, and great-coat, while the Saxons' equipment would consist only of shield and seax, with spear, axe, or sword, and a food-wallet.

Alfred probably fixed the date for the muster at Ecgbryht's Stone so as to coincide with an expected attack on the islands, which he may have learned from spies (*vide* the story of his visiting the Danish camp disguised as a minstrel), or may have foreseen from observing Guthrum's preparations and knowing when the tides would suit best for an attempt to cross the marshes. His movements at any rate seem to have been timed so that he seized the heights in rear of Guthrum just when the latter had marshalled his army to advance upon the islands. We infer this from Simeon of Durham's statement that Alfred found the pagans ready for battle, while it is equally clear from other writers that he took Guthrum by surprise.

As to cold being a factor in forcing the Danes to surrender, Mr. Rawlence overlooks the vagaries of the English climate. Most observers know that there is usually a spell of very cold weather about the second or third week in May. A resident in Bridgwater tells me that North Somerset does not escape this and that he has had a clematis killed by it in his garden in a single night. The winds blow keenly over the marshes of the Parret and the Brue, and in Alfred's time this spell of cold weather would fall near the end of May.

Finally, it is argued that from the Poldens the defeated Danes could have escaped, or obtained supplies, by sea. But after the remnants of Hubba's force joined Guthrum, the Devon levies under Odda remained in possession of the left bank of the Parret, and could reoccupy the camp in Cannington Park commanding the tidal ford at Combwich. The river passage could be blocked by sinking a ship or two in the fairway, and Alfred was no doubt as alive to this as he was to the possibility of blockading the Danish fleet in 896 by obstructing the course of the river Lea.

The most striking point in Mr. Rawlence's plan of campaign

based on Edington-by-Westbury is the space given to Alfred's supposed movements between his departure from his Somerset stronghold 'soon after Easter' (*sic*) and the gathering at Ecgbryht's Stone. This ignores the important part played in Alfred's plans by the Athelney position and the untiring warfare thence, and is clean contrary to Asser and the Chronicle, who state distinctly that it was in the seventh week after Easter that Alfred rode to Ecgbryht's Stone, that the assembled Saxon army met him there, and that he marched against the Danes the following day. This leaves no room for the rapid marches by which Mr. Rawlence supposes Alfred to have picked up various contingents at certain specified points and dates as he progressed. We may fairly ask of any plan of campaign that it should account for the 'untiring warfare' and should follow the sequence of events as recorded by Asser and the Chronicle, and Mr. Rawlence's failure to do this knocks the bottom out of his theory.

Beyond this we are asked to believe that, in spite of Hubba's defeat and the active warfare carried on by Alfred from Athelney, Guthrum remained at Edington-by-Westbury, forty miles away, and made no attempt to get into touch with the enemy; that Alfred fixed the rendezvous for his army at a spot only about ten miles from the Danish camp; that Guthrum's intelligence department was so bad that he failed to discover the assembly of an immense Saxon force ten miles away, even though that force marched still nearer to him on the following day; and that an 'astute leader such as Guthrum', in a false sense of security, failed to picket the high ground round his camp, although he knew the danger of the situation and was concentrating his forces to meet it!

An Irish Bronze Casting formerly preserved at Killua Castle, co. Westmeath

By E. C. R. Armstrong, F.S.A., Local Secretary for Ireland

The bronze casting (fig. 1) was recently purchased by the Royal Irish Academy. It was one of the antiquities preserved at

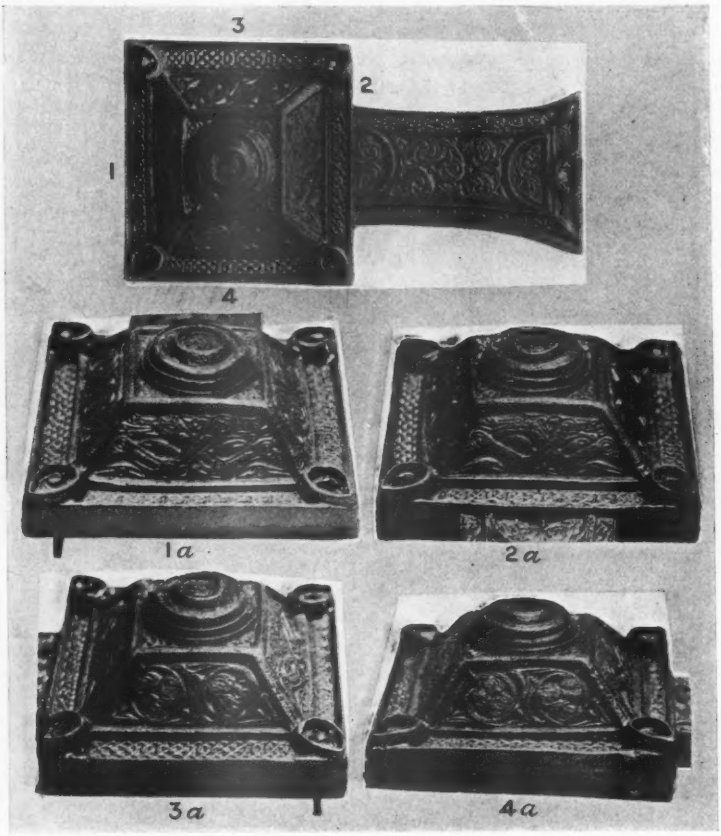


Fig. 1. Irish Bronze Casting (slightly below $\frac{2}{3}$).

Killua Castle, co. Westmeath, but its previous history is unknown. The length of the casting is 4·4 in.: the raised box-shaped

portion is 2·4 in. in breadth, while the flat portion measures at its widest part 1·5 in. Possibly it was the limb of a cruciform mounting for a book-cover. Its ornamentation is admirable.

As will be seen by the illustrations (fig. 1 and fig. 2 no. 3) the flat portion of the casting is ornamented as follows: first comes an

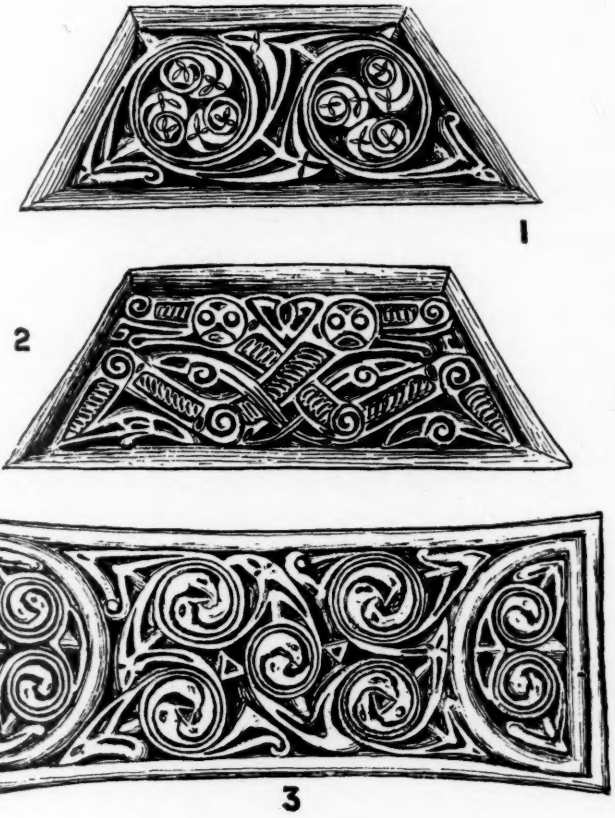


FIG. 2. Details of Bronze Casting (enlarged to twice natural size).

outside border of interlaced work extending from the end to each side, where it joins the enlarged part, there being at the end-corners small raised leaf-shaped ridged divisions, and in the centre a half-circular setting. Within the border at each end are two semicircular divisions containing whorls enclosing two birds' heads: the pattern in the centre consists of five whorls, of which

the central encloses two birds' heads, the others three. The raised box-shaped part of the casting is ornamented round the base with interlaced work, an empty drop-setting being placed at each corner.

The four sides (fig. 1 and fig. 2 nos. 1 and 2) are ornamented in pairs: one pair is decorated with whorls ending in trefoils, having also trefoils in the spandrels ; the second pair is decorated with interlaced animals having crocodile-like heads ornamented with eyed and mouthed circles resembling human faces. The junction of the animals' limbs is marked by spirals, a fore- and hind-limb being in each case discernible. The bodies of the animals have a double outline and are shaded with sloping lines : in the place of an ear each has a 'lappet', these being interlaced to fill the space between the backs of the animals' heads.

The top of the box-shaped portion consists of a circular double setting, the base of each corner being ornamented with an interlaced trefoil.

Mr. Reginald Smith, F.S.A., in his paper on the Steeple Bumpstead boss,[1] has suggested an acceptable sequence for various works of art belonging to the finest period of Irish design ; there is therefore no need further to elaborate the subject. The casting now illustrated is, however, in my opinion, a piece of workmanship of high quality which may with confidence be assigned to the best period of Irish art, that is to the eighth century A. D.

[1] *Proc. Soc. Ant.*, xxviii, pp. 87–94.

Discoveries at Amesbury

By Sir Lawrence Weaver, K.B.E., F.S.A.

[Read 16th December 1920]

On 26th June 1920 workmen in the employ of the Ministry of Agriculture and Fisheries, whilst excavating at the Ministry's Farm Settlement at Amesbury, discovered some bones of a skeleton. The site lies approximately 175 yards north-east of Ratfyn Barrow (marked on the Ordnance Map), and about 6 in. below the surface of the chalk. The grave was about 7 ft. long and about 2 ft. 3 in. in depth. Mr. P. Farrar, of Bulford Camp, a local archaeologist, was at once communicated with, and discovered further remains after a careful search. An extract from his Report to the Ministry reads as follows:

'The second skeleton, which I extracted with my own hands, was at the feet of the first; the bones had been somewhat destroyed, the lower jaw, for instance, lying about 6 in. away from the skull. It appeared as if the body had been dropped in anyhow, for the skull actually rested on a thigh-bone. Rats, moles, cats, and dogs, however, could all get at a shallow interment such as this, and disarrangement of the bones may have been due to action by animals. Close to the place where the head of the first skeleton lay, the workmen in my presence turned up the axehead which you have. Close to the grave on the north side is a pit filled with dark earth which contained some fragments of charcoal. I picked away a little of the face, but saw no relics. Depth about 18 in. but uncertain. The barrow-pit cuts through a wide shallow trench about 9 ft. 6 in. across and 18 in. to 21 in. deep at the centre, distant about 15 in. from the north end of the grave. In the north-west side of the barrow-pit was found, I understand, an urn containing bones. The bones had all crumbled in the urn, which was in a hole not more than 15 in. deep and lay in fragments.

'I may add that there were some unimportant fragments of three types of Romano-British pottery found in the surface soil.

'On the 15th July I revisited the site and, after clearing away some of the fallen material, reached the undisturbed chalk at the southern end of the original excavation. There appears to me to be a distinct curve on the end, and it is possible that the bodies were buried in their pit dwelling. The pit at the side on re-examination looks rather like an annexe shallower and smaller but

connected with the larger excavation ; and the whole thing is reminiscent of certain Early Iron Age pit-dwellings found by Mr. and Mrs. Cunnington, of Devizes, in Casterley Camp. In one of these were found skeletons evidently thrown in after death. It is true, however, that the workmen said the first skeleton was on its side, contracted, with hands up to the face, so we may perhaps assume a natural death.'

After his first visit to the site, Mr. Farrar reported the matter to Rev. G. H. Engleheart, F.S.A., our local secretary for Wilts. He states in his report that 'the axehead is a fine and perfect specimen made of dark green-grey close-grained quartzite, and is very similar to one figured in Evans's *Ancient Stone Implements*, second edition, p. 194, fig. 126. With reference to the disposal of these relics, I venture to urge strongly that they may be deposited in the Salisbury Museum, which is deficient in material from Salisbury Plain. The British Museum already possesses an abundance of similar objects. Our Fellow Mr. F. Stevens, the curator, is doing excellent educational work in Salisbury by the instrumentality of the museum, and the acquirement of additional objects will be of much service to him. Dr. Blackmore, of the same museum, is very competent to report on the skeletons.'

As regards Mr. Engleheart's suggestion, the Ministry does not propose to relinquish its formal ownership of the axe. Arrangements, however, will be made to place the axe in the Salisbury, South Wilts., and Blackmore Museum at Salisbury, on what will doubtless prove to be permanent loan, and it will be exhibited there with other antiquities discovered at Amesbury, which are already in the curator's charge.

Mr. Reginald Smith added the following notes :

In the absence of any definite association, the exhibits must be judged on their individual merits ; but several analogies are available, and there is little room for doubt that the axe-hammer dates from the earliest stage of our Bronze Age, when the dead were buried unburnt and beakers formed part of the normal grave-furniture.

The Amesbury specimen (fig. 1, *a*) certainly came from such a burial, though it is doubtful if a beaker also belonged to it : one fragment among those exhibited, $\frac{3}{8}$ in. thick, seems to belong to an exceptionally large specimen of that type, as the lip is bevelled on the inner side, a peculiarity noted on more perfect vessels at Gullane Bay, Haddingtonshire (*Proc. Soc. Ant. Scot.*, xlii, 315, 317) and at Peterborough (*Archaeologia*, lxii, 345). The other fragments belong to several vessels not of the beaker type, all no

doubt dating from the Bronze Age, but otherwise nondescript. Some over $\frac{1}{2}$ in. thick may belong to cinerary urns.

Axe-hammers or battle-axes are comparatively rare in the British Isles, but the present type is well represented; and, pending an examination of the whole series, parallel examples with some evidence of date may be enumerated here. It will be noticed that the Amesbury axe is slightly dished on the top and bottom faces, and that its depth and maximum breadth are both $1\frac{1}{2}$ in. Col. Bidder's exhibit, from the Thames at Datchet (fig. 1, *b*),

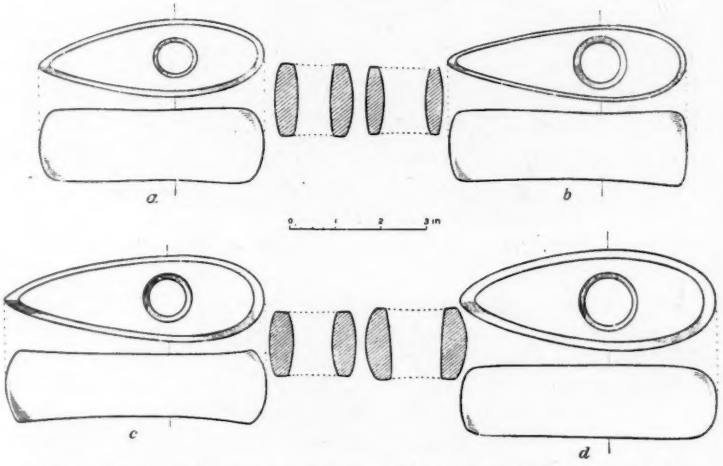


FIG. 1. Perforated Stone Axe-hammers found in England: *a*, Amesbury; *b*, Datchet; *c*, Standlow; *d*, Bulford.

is almost an exact duplicate, with the same width and depth, and only one-fifth of an inch longer: the top and bottom are nearly flat. River-finds are seldom of evidential value, but fig. 1, *c*, represents a British Museum specimen found in a barrow (Standlow, Derbyshire) by J. F. Lucas in 1867. It is $5\frac{1}{2}$ in. long, and is said to have been found with a bronze dagger, also in the museum (*Archaeologia*, xliii, 411, note 2). It is dished at the top and bottom, like the fourth illustrated here (fig. 1, *d*), which is also of the same length. This was found by Col. Hawley on Bulford Down with a primary burial of a brachycephalic man in the crouching attitude (*Wilts. Arch. Mag.*, xxxvi, 617 and 622, fig. 5). Traces of the handle were noticed, and a wedge of bone found that had been used for security. With many other finds on Salisbury Plain it was presented to the national collection.

A larger specimen, $6\frac{1}{2}$ in. long, is under Mr. Parker Brewis's

charge at Newcastle-on-Tyne Museum, and was found deep in the bed of the river Wear above Sunderland Bridge. Its site has been taken to confirm the view that this series is of Scandinavian origin, but other specimens from barrows elsewhere in England can hardly be so explained.

One of hard bluish stone veined with white (fig. 2) is illustrated in *Archaeologia*, xliii, 410, fig. 96, and in the Salisbury volume of the Archaeological Institute (1851), 110, fig. 14. It accompanied

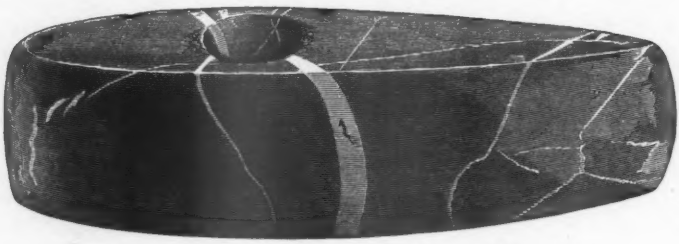


FIG. 2. Stone Axe-hammer, East Kennet, Wilts. ($\frac{2}{3}$).

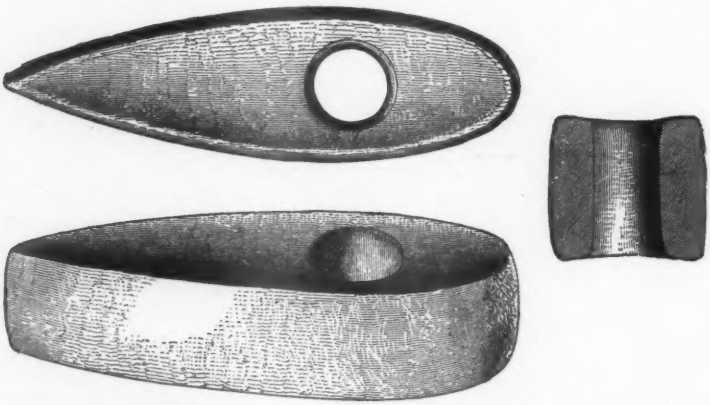


FIG. 3. Stone Axe-hammer, Bardwell, Suffolk ($\frac{1}{2}$).

a skeleton with a beaker and bronze dagger-blade in a barrow near the long barrow at East Kennet, Wilts.; but there are glaring discrepancies in the two accounts of the find. In Weston Park Museum, Sheffield, are two with slightly expanded cutting-edge, accompanied by bronze dagger-blades, each with three large rivets. Both are of toadstone, and were found in Derbyshire with skeletons: one is 4 in. long and comes from Carder Low, the other is $\frac{1}{4}$ in.

longer and accompanied a secondary interment in a mound at Parcelly Hay, near Hartington (*Bateman Colln. Cat.*, pp. 6, 8).

Several others are quoted by Sir John Evans (as fig. 3), but not all conform strictly to the type under consideration. This is characterized by a uniform thickness from cutting-edge to the butt-end, the edge having little or no tendency to spread nor the butt to become conical. It is more than probable that this is the earliest form of the stone battle-axe in Britain, although the reverse order of development has been advocated by Nils Åberg in *De Nordiska Stridsyxornas Typologi.*

As there is apparently no predecessor in the Neolithic Period, it is necessary to account for the sudden appearance of this weapon in Britain ; and its ultimate origin seems to have been in Hungary, where copper was known very early and continued in use for a long time. Axe-heads of this form were exported from that centre, and one is illustrated from Norway (fig. 4). On the

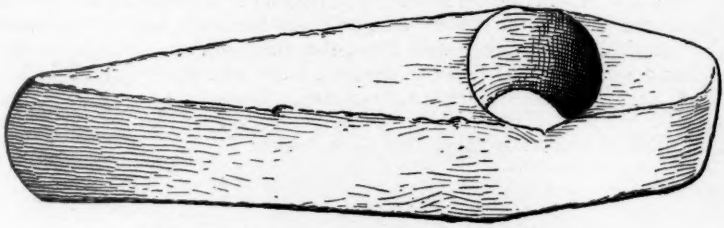


FIG. 4. Copper Axe-hammer found in Norway.

fringe of Europe metal was first worked at a comparatively late date, perhaps a thousand years after its appearance in Hungary, and remained scarce for centuries ; hence the copper weapon was imitated in stone, and underwent a development that can only be explained by constant reference to metallic models.

References to several copper or bronze specimens found in Scandinavia are given by Professor Montelius in *Archiv für Anthropologie*, xxv, 467, note 1, and xxvi, pp. 472, 493 ; and if this argument is sound, it has an important corollary. Copper, if not bronze, was contemporary with the beakers of Britain, and there is no proof that stone axe-hammers were made in our Neolithic Period. In Scandinavia, which was much nearer the original source of metal, many of the stone battle-axes date from megalithic times (passage-graves and cists, marking the last two stages of the neolithic there). Did Scandinavia get into touch with Hungary before copper tools reached Britain from that centre, or did the British Bronze Age begin much sooner than

the Scandinavian ? There are reasons for thinking that the cist-burials of Scandinavia were contemporary with the Early Bronze Age of Britain (*Proc. Soc. Ant.*, xxxii, 19) ; but on the other hand Knut Stjerna attributed the Scandinavian passage-graves to the Copper Age (*Proc. Prehist. Soc. E. Anglia*, iii, 24). Professor Montelius thinks the Bronze Age began about the same time on either side of the North Sea ; and the stone axe-hammers afford a likely means of reaching a final agreement on this point.

Discussion

Mr. PRAETORIUS had found on the sea-shore north of Anglesey a drifted Scottish boulder of granite which appeared to be a similar axe-hammer in the course of manufacture. The drilling had been begun from both faces, but, like the shaping of the stone, had never been completed.

The PRESIDENT expressed the Society's indebtedness to Sir Lawrence Weaver for the exhibit, and was not surprised to find that so beautiful a weapon dated from the Bronze Age, though it was rather an inversion of ideas to derive a stone axe from a metal prototype. He questioned whether the material was quartzite, and whether all the pottery fragments were contemporary. The bevelled lip indicated an unusually large size for a beaker.

Irish Gold Crescents

By Reginald A. Smith, F.S.A.

[Read 2nd December 1920]

Since their first publication in 1757 (*Archaeologia*, ii, 32, pl. ii), the gold crescents characteristic of the Early Bronze Age of Ireland have remained in part unexplained; and the various names suggested for them reflect the prevailing uncertainty as to their use and significance. In his recently published *Catalogue of Irish Gold Ornaments*, our Fellow Mr. Armstrong has brought together all the existing material, and on consideration adopts the view that these gold crescents were worn as collars. They at first went under the name of *lunulae* or little moons, and a favourite term in later years has been *lunette*, which is generally used in French for 'telescope', and though more manageable than *lunula*, is not so fitted for international use as 'crescent'. All three names suggest a connexion with the moon, and are certainly more fully justified than 'tiara' or 'diadem', as the notion that crescents were part of the head-dress has long been exploded, in spite of the fact that the daughters of Zion, late in the eighth century B.C., wore 'round tires like the moon', for which they were reproved by Isaiah (iii. 18).

At the meeting on 2nd December two specimens were exhibited that had hitherto escaped publication. One was indeed hardly known outside the Drapers Company, and was found on the company's property at Draperstown, co. Derry, twelve miles north-west of Lough Neagh (fig. 1). It is of normal construction, engraved on one face only, with a triple row of ornament on the edges of the central portion. Most of the surface near the points is occupied by a bold chequer pattern, alternately hatched and plain, and the terminals are oval. The opening is 6 in. across and the entire width 9 in., the weight being 2 oz. 12 dwt. 14 gr. (82 grammes).

The second was already known as the Lesnewth crescent (fig. 2), and its history has been recovered by the Society's local secretary for Cornwall, Mr. George Penrose, curator of the Truro Museum. According to his report it formed lot no. 829 at the Red Cross sale at Christie's on 28th March 1917, and was described in the catalogue as 'a prehistoric gold torc found in a barrow in Cornwall: presented by the Lady Haversham'. It is certainly not a torc, but its discovery in a barrow is important,

and the present writer is informed by Mr. Dewey, of the Geological Survey, that it was found with a human skeleton.

The Truro Museum had an outline drawing of 'a gold crescent stated to have been found at Hennet, St. Juliot, near Boscastle, about 1862, and bought by Mrs. Hayter for £50: weight, 8 sovereigns'. Lady Haversham was formerly a Mrs. Hayter,

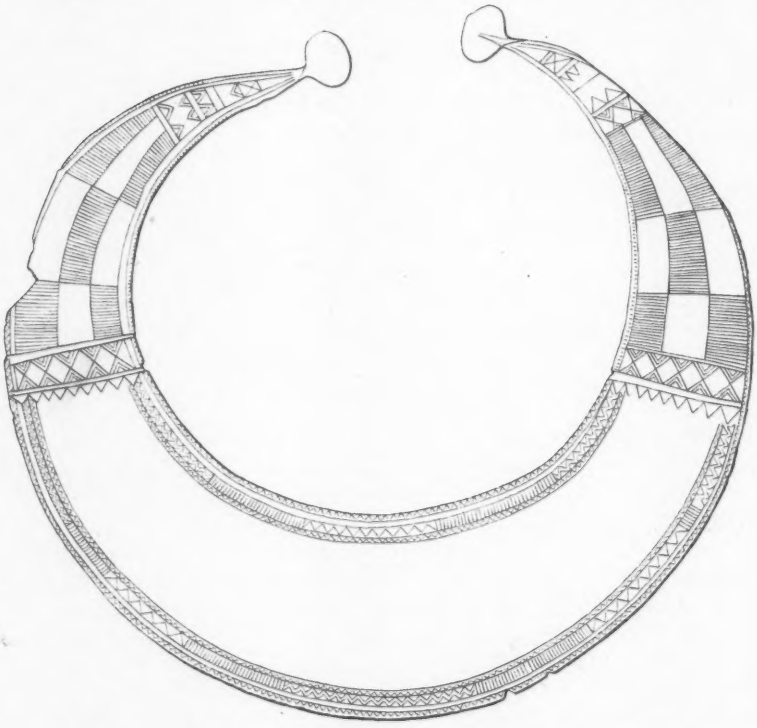


FIG. 1. Irish Gold Crescent belonging to the Drapers Company (½).

and Mr. Penrose was thereby convinced of the identity of the crescent, eliciting from her ladyship that it had been purchased by the late Mr. John Douglas Cook[1] for £50 and presented to her as a wedding present in 1866. She understood that it had been discovered a short time before in the district of Camelford, and having regarded it as a valuable prehistoric object had almost from the first kept it at Coutts's bank. Further inquiry enabled

[1] Editor of the *Saturday Review*, with a residence at Tintagel, Cornwall: he was buried in the churchyard there in 1868.

Mr. Penrose to state that about 1860 a workman named Tink was cutting through a marsh belonging to a farm called Cargurra, attached to Hennet, in the parish of St. Juliot, Hundred of Lesnewth, Cornwall, in order to drain the place, and at about 5 ft. from the surface came across the crescent. The finder regarded it as a sheep's collar and gladly parted with it for a trifling sum to his employers, two brothers named Lilliecrapp, who then lived at

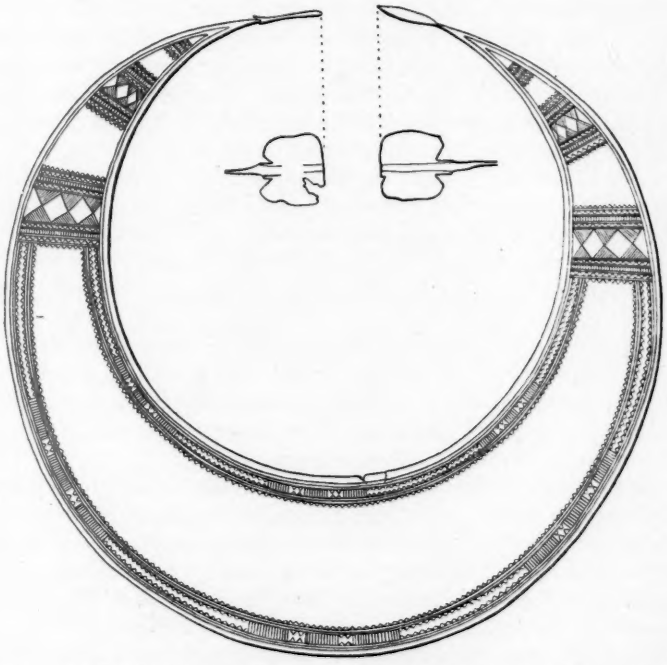


FIG. 2. Irish Gold Crescent belonging to the Royal Institution of Cornwall ($\frac{1}{2}$).

Hennet. After the death of one brother, the other sold it in 1866 to the late Mr. E. J. Hurdon, a chemist at Camelford, for its weight in gold coin, and shortly afterwards Mr. Hurdon sold it to Mr. J. D. Cook for £50. Its weight is 2 oz. 5 gr. and the diameter is 8 in., the opening being $5\frac{1}{2}$ in. across.

It is a fine specimen, complete and well preserved, with the same dimensions as no. 38 in the Dublin catalogue (pl. vii, no. 34), which has very similar ornament but weighs 6 dwt. less. The latter was found in a rock-fissure below the surface at Lisanover, near Bawnboy, co. Cavan, in 1908.

This welcome exhibition prompted a further inquiry into the meaning of this important group of antiquities, and it will be unnecessary to repeat what is already familiar. An important paper by M. Salomon Reinach, Hon. F.S.A.,[1] put the matter in a new light, and confirmed the Irish origin of all in north-west Europe; but the religious aspect, first discussed by M. Camille Jullian,[2] has interesting possibilities, and what follows may rank as evidence in favour of that view.

It was observed long ago, says Ignaz Goldziher (*Mythology among the Hebrews*, 72), that wherever sun-worship exists, moon-worship also is always to be found, being a residuum of the earlier stage of religion; but not in the reverse order. Authorities seem to agree that the moon was worshipped at the nomadic stage of civilization, and the sun at the agricultural stage. Agriculture is supposed to have been introduced into north-west Europe at the same time as the fashion of building dolmens (about 3000 B.C.); and if the Irish crescents be taken as lunar symbols—the most obvious interpretation—they represented in the Early Bronze Age a cult that dated back at least a thousand years, and was by that time a mere survival.

In recent years a series of discoveries have confirmed the existence of sun-discs in the British Isles, dating from about 1200 B. C. and indicating a religious change on the approved lines. This is a subsidiary argument for placing the crescents in the opening centuries of the Bronze Age.

Their ornamentation tells the same tale. Though geometric patterns are widespread and belong to various periods, it is significant that the motives occur on the beakers or earliest ware of the Bronze Age, and may be recognized in Lord Abercromby's first volume on the subject, plates xxiii–xxviii. The beaker, however, is almost unknown in Ireland, and it must therefore be inferred that the goldsmiths of Ireland and the potters of the beaker-people derived their decorative style from the same source, though they perhaps never came into contact with each other. It is interesting to note that M. Louis Siret (*Chronologie et Ethnographie Ibériques*, i, 225, fig. 70) compares the decoration of Irish crescents with that of Spanish pottery (beaker period).

Except for a narrow border on both edges, the decoration is confined to the pointed ends of the crescent, and the middle portion is left quite plain. This may possibly indicate artistic restraint, but is equally opposed to the collar and diadem theories,

[1] *Revue Celtique*, 1900, 95–7, 166–75, cf. 1892, 194, for his view that Druidism was pre-Celtic.

[2] *Journal des Savants* (Bordeaux), 1911, 153.

which would lead us to expect ornament in the middle, not at the ends, which would be hidden by the hair in either case.

Taken at their face value, the crescents represent the moon; and their decoration, both in character and distribution, recalls a series of stone and pottery antiquities found in Swiss lake-dwellings and dating from the later Bronze Age.[1] The suggestion of a connexion between them is now found to have been anticipated by G. von Escher von Bergin, 1853 (*Mitt. der antiq. Gesell. Zürich*, vii, 101, pl. i, figs. 1, 3), but no explanation seems to have been given of the restriction of ornament to the points. Some of the Swiss specimens (as fig. 3) agree with the crescents in this respect, and the reason may be found in the close connexion between moon-worship and the sacrifice of bulls. The

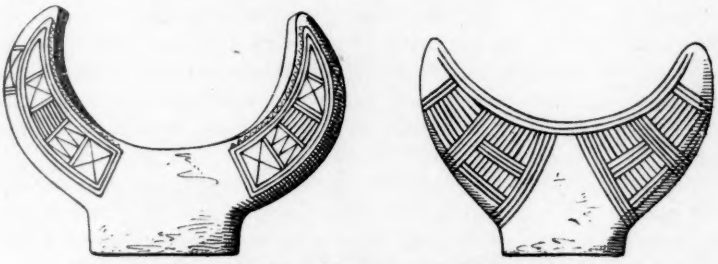


Fig. 3. Stone and Pottery Crescents from Swiss Lake-dwellings.

horns are not only separated by the forehead, but would most frequently be ornamented with metal caps or gilding. Déchelette connected the Swiss crescents with the sacred horns of ancient Crete; and a fairly close parallel is illustrated by Sir Arthur Evans from the Idaean cave at Patso (*Mycenaean Tree and Pillar Cult*, in *Jour. Hellenic Soc.*, xxi (1901), 136, fig. 19), though in this case there is the stump of a pillar rising from the middle, between the horns.

The connexion between the crescent moon and the bull's horns may be taken for granted, but it is difficult to determine cause and effect in this case. Tschumi (*Vorgeschichtliche Mondbilder und Feuerböcke*, p. 20; appendix to Report of Berne Historical Museum, 1911) quotes an opinion that Bronze Age man saw in the crescent moon a glowing bull's head rather than the moon in a bull's head. Sir Arthur Evans also states that the biblical

[1] Discussed in Dr. A. Schenk's *La Suisse préhistorique* (1912), 324, with references. See also Déchelette in *Revue archéologique*, 1908, 301, and his *Manuel*, ii, 472; and illustrations in Keller's *Lake-dwellings*, pl. xxxvii, lxxx, lxxxi, xc, and cxlv.

'horns of the altar' were no longer the actual horns of the victim, being of the same wood as the altar itself, in this respect standing to the original in the same secondary and symbolic relation as those of their Mycenaean equivalent.

On this theory the familiar passage in Pliny (*Nat. Hist.* xvi, § 249–51) has a new significance, and not only reveals the Druids as moon-worshippers, but suggests that their religion was born, as it certainly died, in Ireland. Dr. Rice Holmes (*Ancient Britain*, 115) says 'the belief has long been growing that Druidism was of non-Celtic and neolithic origin; but our knowledge of it is confined to the period when it was a Celtic institution'. Caesar (*Bell. Gall.*, vi, 18) records that the Gauls reckoned time by nights instead of days (as in Genesis i), and in the time of Pliny (died A.D. 79) the Gaulish Druids had sunk to the position of medicine-men, one of their principal remedies being the mistletoe, which was cut by a Druid with a golden sickle on the sixth day of the moon. He was clothed in white for the occasion, and sacrificed two white bulls, afterwards making a potion of the mistletoe. The moon would still be horned, approaching the semicircle or first quarter, and visible in the evening; the bulls' horns as well as the leaves of the plant (fig. 4) symbolized the moon; and the golden sickle, if not a misinterpretation of the ceremony, may well have been a belated representative of the Irish crescent, turned from a likeness of the deity into a cutting implement of doubtful efficiency.

A bronze object (fig. 5), hitherto unexplained, may be a later development of the crescent, and in technique foreshadows the torcs of the later Bronze Age. It was found with the skeleton of a tall man in a primary burial below a barrow at Wilsford (Hoare, *Ancient Wilts.*, i, 209, pl. xxix), and may have been attached by the rivets to a pole for use as a standard, though the chain attached to the centre points rather to its use in an inverted position, like the crescent amulets described by Sir William Ridgeway (*Journ. Royal Anthrop. Inst.*, xxxviii, 241), but in this case the chain may have served to hang up the standard. Its date is clear from the flanged celt and stone axe-hammer (*Archaeologia*, xliii, 411, fig. 97) found with it, and the large tusk of a boar may have formed part of a lunar emblem.

This in its turn suggests a connexion with the lucky horse-shoe on a house-door; and the pottery crescents of Switzerland are supposed by some to have been used in this way as talismans.[1] Provided with a base, they were evidently intended to

[1] A jadeite pendant of similar form, from La Buisse, Isère, is figured in de Mortillet's *Musée préhistorique*, 2nd edition, no. 774.

stand, and in this respect throw no light on the method of handling the gold crescents, one of which was found in a wooden case, and may have always been displayed in that manner to devotees. It is difficult to believe they were actually attached to wood or other material, and the square or rounded terminals (turned at right angles to the plane of the crescent) are not well adapted for suspension. An explanation will probably be found, but it may be remarked that these plates eliminate the danger of

Fig. 4. Leaves of the Mistletoe.

Fig. 5. Bronze from a barrow, Wilsford, Wilts. ($\frac{1}{2}$).

sharp points, and would themselves be barely visible in a front view of the crescent (see fig. 2).

If moon-worship and the gold crescents were not indigenous, they are more likely to have reached Ireland from the south than from Britain. A possible link with the Spanish peninsula in the Early Bronze Age or even the Copper Age[1] is the *betyl* or limestone pillar ornamented with a crescent found at Palmella, near Lisbon (cast in British Museum), and illustrated in Cartailhac's *Âges préhistoriques de l'Espagne et du Portugal*, p. 136; also by Louis Siret in *Revue préhistorique*, 1908, 199. A symbolic moon

[1] Assigned to Early Aeneolithic (B) by Dr. Schulten, *Hispania* (1920).

is sometimes found in the Aegean area, but is distinctly oriental in character, and was an abomination to the Hebrews. Their priests and prophets forbade the worship of the Queen of Heaven, and Job considered it blasphemous (xxxi, 26–8); even the 'little moons' from the necks of the Midianites' camels, plundered by Gideon, played havoc with the faith of Israel (Judges viii, 21–7). On account of its pagan associations even the mistletoe was under a ban till the Reformation.

Further discoveries in the East may turn these scattered links into a chain of evidence; but at present Spain, in spite of its beakers, seems most likely to have been the intermediary,[1] and M. Salomon Reinach has drawn attention to the fact that flint arrow-heads of lozenge form, polished on both faces, are confined to Ireland and the Peninsula. These would date from the Late Neolithic Period when the dolmen idea reached Ireland. And if the megalithic tomb was of oriental origin, perhaps the worship of the moon was introduced into Ireland by the same route and by the same seafaring people.

Discussion

Mr. Praetorius considered the specimen from the north of Ireland an elaborate piece of goldsmith's work. The bubbles produced in casting the metal were still visible, and it was evident that the pitch bed for hammering out the gold was already in use. It was admitted that the craftsman was an expert with the punch, but could the use of a graver also be proved? The lines appeared to be scratched, and he doubted whether the pure line of the graver dated from the Bronze Age.

Mr. Leeds said no explanation had been given of the discovery of lunettes in burials, and inquired the sex of the cases known. Statuettes of women were found abroad (as in Spain and Asia Minor) with what looked like a nimbus behind the head, and he suggested that the lunette was part of a woman's head-dress, the terminal lobes being fastened in the hair for security. The gorget theory was inadmissible; but worn as a diadem the lunette would be entirely visible.

Mr. Smith replied that the sex of the St. Juliot skeleton was unknown; but if the lunettes were in any way connected with the moon, it should be remembered that a gold sun-disc had been found in a sepulchral cist on Lansdown Links,[2] near Bath, and religious

[1] M. Louis Siret (op. cit., pp. 429–38) gives reasons for regarding Druidism as of oriental origin; see also Dr. J. A. MacCulloch's article on Druids in Hastings's *Encyclopaedia of Religion and Ethics*.

[2] *Proc. Soc. Ant.*, xx, 254; Bath Field Club, 1906.

emblems had never been out of place in burials. The diadem theory had been rejected by recent writers.

The PRESIDENT said that the exhibition had, like many others, had interesting developments, and the archaeologist could easily find in the lunettes more points worthy of discussion; for instance the abundance of gold at that time in Ireland and the absence of silver. M. Salomon Reinach held that the metal was largely produced in Ireland. His own impression was that the ornamentation was done with a sharp point under extreme pressure, and not engraved in the true sense of the word. Thanks were due to the Master and Wardens of the Drapers Company and to the Royal Institution of Cornwall for lending such interesting antiquities, and to Mr. Smith for elucidating the problems involved.

Notes

Keeper of the King's Armouries.—Mr. F. A. Harman Oates, F.S.A., has been appointed to succeed the late Sir Guy Laking, F.S.A., as Keeper of the King's Armouries.

The late Mr. A. L. Lewis.—When ancient stone monuments were under discussion, Mr. A. L. Lewis frequently attended the meetings of the Society of Antiquaries, and on more than one occasion spoke on his favourite subject. His death on 22nd October 1920, at the age of 78, removes a serious student of our past, and a venerable member of the Royal Anthropological Institute, which he joined in 1866. Two years later, at the first International Prehistoric Congress (held at Norwich and London), he read a paper 'on certain Druidic monuments in Berkshire', illustrated by plans of Wayland's Smithy and the Sarsen stones at Ashdown House; and in later years his zealous participation in the annual congresses of the Prehistoric Society of France earned him a decoration from the Republic. It is hoped that full use will be made of his memoranda on British megalithic monuments.

Margaret Stokes Lectures.—The Margaret Stokes lectures were this year given in Dublin by Mr. E. C. R. Armstrong, F.S.A. The subject chosen was typology, or the application of the principles of evolution to certain groups of antiquities in order to demonstrate successive changes in form and ornamentation, and so to furnish evidence of date in the absence of other indications.

Munro Lectures.—The Munro lectures for this year were arranged to be given in French by the Abbé Breuil, Hon. LL.D., Cantab., on ten dates between 14th and 25th February, at the University New Buildings, Edinburgh, the title being *L'Art paléolithique et néolithique.* The subjects chosen were the Aurignac, Solutré, and La Madeleine stages of the palaeolithic Cave period, the cave-paintings and wall-engravings of France and Spain, the cultures of Mas-d'Azil, Maglemose, and Tardenois, and the art of the French dolmens and Irish megalithic monuments.

Celtic Remains in the Mendips.—At a recent meeting of the Royal Anthropological Institute, an account was given by Mr. L. S. Palmer of the exploration, by the University of Bristol Speleological Society, of a cave in the Mendips, inhabited at some time between 400 B.C. and the beginning of the present era by a tribe of early British settlers of the same race (the Brythons) as those who built the Glastonbury Lake Village and inhabited Wookey Hole and Worlebury camp. A unique feature is that there is no evidence of earlier or of Roman occupation. The evidence for the Brythonic occupation takes the form of pottery, iron and bronze objects, worked bone and stone, all of typical Late Celtic types. All the finds were deposited on the surface, in most cases covered with a thin layer of stalagmite, or in a thin black band of mud. The most interesting discoveries consisted of bronze hub-bands of chariot wheels, bronze bracelets and finger rings, iron shackles, and a piece of a currency bar. The pottery is

comparable with most Late Celtic ware, although the characteristic curvilinear motives are absent. Only three human bones were found. The general conclusion is that the cave was used as a temporary place of refuge during the first half of the Early Iron Age.

Plateau finds at Ipswich.—As the late Mr. Worthington Smith's discoveries on the Chilterns have been published by the Society (*Archaeologia*, lxvii, 49, and *Proc. Soc. Ant.*, xxxi, 40), mention may be made of a parallel find at Ipswich on two plots of ground acquired for exploration by Miss Nina Layard and Mr. Reginald Smith. The report appears in *Proceedings of the Geologists' Association*, vol. xxxii, p. 1, with sections of the pit and illustrations of the best implements discovered. All are of late Drift type, and a fine ovate with twisted sides evidently belongs to a late stage of St. Acheul. Excavations were carried out with the aid of a grant from the Percy Sladen Trustees, and showed that the implements came from brick-earth under gravel, the latter being contorted along the east side of the pit. Previous borings had revealed a boulder-clay deep below the brick-earth, and the conclusion reached was that the industry was inter-glacial and contemporary with the bulk of the Caddington flints. The site is an isolated part of the plateau east of Ipswich, between the main and lateral valleys of the Gipping and Deben and 120 ft. above sea-level. There is now additional evidence that the contorted gravel is of Le Moustier date and corresponds to the chalky boulder-clay which terminates in an east and west line only a mile to the north.

Roman Standard and Chair.—The two items described as a Roman standard of the 9th Legion and a Roman general's camp-chair did not together fetch more than £200 at auction on 7th December 1920. The former is published in Daremberg and Saglio's *Dictionnaire des Antiquités*, iv, p. 1313, fig. 6419 (where it is erroneously said to be in the Cinquantenaire Museum at Brussels); and reference is also made to Babelon's *Traité* (1901), i, 669; *Bulletin de la Société nationale des Antiquaires de France*, 1901, 168; and *Rivista Italiana di Numismatica*, 1912, 35. Both were included without locality in the W. H. Forman sale at Sotheby's in 1899–1900.

Roman Burials in Kent.—During the construction of a saw-mill at Ospringe, between the railway and Watling Street, west of Faversham, several burials of the Roman period were discovered in the brick-earth and preserved by Mr. William Whiting, one of the owners of the mill. The site was twice inspected by two members of the Society, and with a grant from the Council the excavation was extended in the hope of further finds. Two more groups of sepulchral pottery were thus discovered, and most of the series seems to date from the second century, before cremation went out of fashion. Careful measurements and drawings have been made, and a fuller report may be expected on the cemetery, which had an obvious relation to the Roman road.

Palaeolithic Portraits.—The human portraits of palaeolithic date from a French cave recently announced, especially in the English press, are not a new discovery, but have been published by Dr. Lucien Mayet and M. Jean Pissot, who made the discovery in the rock-shelter

called La Colombière, near Poncin, Ain. The chief engraving represents a man on his back with right hand raised, and the headless body of a woman standing. The subject was revived by a lecture in France, and was treated as a new discovery by one of the reporters present; but an account of the find was given in the *Illustrated London News* of 1st November 1913.

The Piltdown Skull.—In the December issue of *L'Anthropologie* (xxx, p. 394) Professor Boule of Paris, who communicated a paper on the skull and jaw of Piltdown to the French Institute of Anthropology, is reported as follows: The skull differs in no important point from that of modern man; the mandible, on the other hand, is that of a chimpanzee. *Eoanthropus* is therefore a composite being. This opinion was at first expressed with some reserve, but after the labours of the American mammal experts, Messrs. Miller and Gregory, the question seems definitely settled on these lines. The fragments of skull are certainly ancient, but it is difficult to fix their geological date, because the bed in which they were found is quite superficial, and may have been disturbed at various periods. Further details may be found in his recent volume, *Les Hommes fossiles: éléments de paléontologie humaine.*

Cissbury Camp.—It is good news for archaeologists that the National Trust for Places of Historic Interest or Natural Beauty is in treaty for the purchase of Cissbury, the well-known entrenchment on the South Downs three miles north of Worthing, that several excavations since General Pitt-Rivers's first attempt in 1867 have shown to be rich in relics of the Stone Age. In view of recent developments elsewhere, it is felt that further investigation of this site would be of interest, and it may be anticipated that under the new control excavation will be strictly regulated but not forbidden. The earthworks have been proved later than the flint-mines, but how much later is a question that only the spade can decide. This beautiful stretch of down, 600 ft. above the sea, can be acquired in the public interest for £2,000, and it is hoped that Fellows of this Society as well as readers of the *Journal* will signify their approval of the scheme by sending subscriptions to the Secretary, National Trust, 25 Victoria Street, S.W. 1.

Excavations at St. Albans Abbey.—During the autumn of last year excavations on the site of the chapter-house of St. Albans Abbey were undertaken in the Dean's garden by the St. Albans and Herts. Architectural and Archaeological Society. It is known from the *Gesta Abbatum Sancti Albani* that the chapter-house built by Paul de Caen, the first Norman abbot (1077–93), was rebuilt by Robert de Gorham (1151–66). This building was repaired by John de Wheathampstead in his second abbacy (1452–65), and the work was continued by William Wallingford (1476–92), who spent very large sums upon it. The chapter-house was in the usual position on the east side of the cloister, south of the south transept. A portion of the west wall was found under the western boundary wall of the Deanery garden, and the western part of the south wall, showing a well-cut flint face and

evidence of a blocked doorway, was uncovered, but the eastern part of this wall appears to have been grubbed up. Unfortunately the position of the carriage drive prevented the exploration of the eastern part of the building, and consequently its length could not be ascertained. The north wall is known to be under the pathway on the south side of the slype, so that the interior width of the chapter-house can be given as about 30 ft. The floor at the west end of the building, at some time possibly in the thirteenth century, was raised about 15 in. The lower floor was of Roman bricks and thin tiles which probably formed the bed for Robert de Gorham's paving tiles, but the later floor above was discovered with the tiles in position. These tiles were of green glaze, with raised designs similar to those now in the presbytery of the church, which were copied from thirteenth-century examples found on that site. On the south side of the chapter-house was a passage about 2 ft. 9 in. wide between it and another building. Only a small piece of the wall of this latter building was uncovered, so that it was impossible to decide what it was. Both the inner parlour (*regulare locutorium*) built by Abbot Robert de Gorham and the chapel of St. Cuthbert were, we know, near the chapter-house. The only detail of this building brought to light was a half octagonal base of a respond towards the west end of its north wall.

The Stone Age of the Sahara.—Important discoveries in the French Sahara by MM. Reygasse and Latapie were announced in the *Revue scientifique*, 9th October 1920, and kindly communicated by M. Léon Coutil, Hon. F.S.A. A fine series of advanced St. Acheul implements was found seventeen miles south of Tebessa, corresponding to the industry at the base of the *ergeron* at St. Acheul itself and at Montières, near Amiens. A pure Le Moustier industry was collected twenty-six miles further south in the desert; and tanged implements hitherto considered neolithic were proved to be of earlier date, as end and side-scrapers occurred under 11 ft. of barren deposits at Bir-el-Ater, and the corresponding fauna was found in association elsewhere. In the Sahara the culture of Le Moustier seems to have lasted till neolithic times, whereas further north in Africa that of Aurignac had a wide extension and eventually influenced Europe. Specimens of Solutré type seem to be derived direct from St. Acheul forms, without the intervention of Le Moustier or Aurignac, and have not been hitherto acknowledged in the Sahara.

Excavation of Tell el Amarna.—The Egypt Exploration Fund has now changed its title to the Egypt Exploration Society, and has taken up anew after the War its task of excavating the remains of Ancient Egypt and of publishing the results. The last excavation undertaken before the War was that of the Osireion at Abydos, which is not yet completed. But its continuation is postponed for the present, and the Society has deemed it wiser to turn its attention to another site which promises more important and speedy results. The German work at Tell el Amarna, which had produced results of the highest value, is necessarily at an end, and the Society now proposes to carry on and complete this excavation. The interest of Tell el Amarna is great. Built by Akhenaten, the heretic king, it was first excavated by

Professor Petrie in 1891, who was attracted to the site by the discovery in 1887 of the famous cuneiform tablets, containing the dispatches of the king and of his father Amenhetep III to the governors and princes of Palestine and Syria, during the time when the Hittite king Shebbiluliuma was extending his influence over northern Syria, and the nomad tribes of the Khabiri were bringing anarchy into the Egyptian dominion in Asia. That these Khabiri were possibly the Hebrews, the Israelites themselves in process of taking possession of the Promised Land, adds enormously to the interest of this epoch-making discovery of the tablets. Professor Petrie discovered a few more of these tablets, and at least one other came to light during the German excavations. That more may come to light to supplement the story unfolded by the decipherment of these tablets and of the others found at Boghaz Keui in Anatolia, is one of the hopes that has led the Egypt Exploration Society to el Amarna.

To those, too, who are interested in the history of religious thought, the excavation of the city of Akhenaten, the first monotheist in the history of the world, should also appeal deeply, for it is possible that the worship of the Aten may have had an influence upon the later development of Jewish monotheism. More immediate results may undoubtedly be looked for in the discovery of works of art of the school of Akhenaten, such as have been found in rich measure during the German excavations, which have rescued from oblivion some of its finer and more interesting productions. It is hoped, too, that further evidence may be found of the connexion between Egypt and Minoan or Mycenean Greece at this time, the middle of the fourteenth century B. C. Sherds of Greek and Cypriote pottery of late Minoan III style were found by Professor Petrie at el Amarna, and at Enkomi in Cyprus rich treasures of imported Egyptian art of the time of Amenhetep III were discovered. Mycenae and Rhodes have also produced imported Egyptian objects of their time, and it is hoped to find at el Amarna, as did Professor Petrie, traces of Mycenean art and evidences of Greek influence on Akhenaten's craftsmen. Finally, in the domain of architecture our knowledge has been greatly increased by the German excavations, and it is hoped that results just as important may be obtained.

The excavations will be directed by Professor T. E. Peet, assisted by Mr. A. G. K. Hayter, F.S.A., and Mr. F. G. Newton; and Professor Whitlemore, representing the American subscribers, will accompany the expedition. The Egypt Exploration Society is surely justified in thinking that this work is one that must appeal greatly to all, and confidently asks for the monetary support without which the work cannot be carried on as it could wish. Subscriptions and donations should be sent to the Honorary Treasurer, Warren R. Dawson, at the Society's rooms, 13 Tavistock Square, W.C. 1.

Obituary Notice

George Clinch.—The sudden death, on 2nd February, of Mr. George Clinch, the Society's clerk and librarian, within a few days of his sixty-first birthday, came as a sad blow to his many friends within and without the Society of Antiquaries. He was at his work and apparently in his usual health on the Tuesday, but on the Wednesday morning he was taken suddenly ill on his way to the station and died within a few hours.

George Clinch was born on 9th February 1860 at Borden in Kent, and while yet a small boy began to show that interest in archaeology which never left him, by collecting flint implements in the fields around his father's house. After leaving school he obtained an appointment in the library of the British Museum, and during this time found the opportunity of writing several books on London topography, including works on Bloomsbury and St. Giles, Marylebone and St. Pancras, and Mayfair and Belgravia. He also at this time made two communications to the Society, on stone implements from West Wickham and on pit-dwellings at Hayes, Kent, both of which were published in *Proceedings*. On 16th December 1895 he was appointed clerk to the Society on the resignation of Mr. Ireland, and in 1910 the Council added the title of librarian to his office in recognition of his increasing responsibilities and valuable services.

As an antiquary he gave especial attention to prehistoric archaeology, and many of the articles on this subject in the Victoria County Histories were from his pen. As a Kentish man he was naturally keenly interested in the antiquities of his native county, on which subject he wrote many books and papers, included among them being works on Bromley, Hayes, and Keston, on Bromley and the Bromley district, and the *Little Guide to Kent*, and as a member of the Kent Archaeological Society he had contributed papers to *Archaeologia Cantiana*. He had also written books on English costume, on old English churches, and on English coast defences. He was a Fellow of the Geological Society and of the Society of Antiquaries of Scotland, and was an active member of the London Survey Committee. In addition he had served as chairman of the Council of the Association of Men of Kent and Kentish Men.

To the Society of Antiquaries during his twenty-five years' service he always showed a great and loyal devotion, and had endeared himself to the Fellows by his ready courtesy and geniality. He was ever willing to help Fellows in their work to the utmost of his ability, and his thorough knowledge of the library and of the subject-matter of its contents was always at the service of inquirers. He will long be held in affectionate remembrance by all those, and they were many, with whom his official duties brought him into contact.

Reviews

The Church of Our Lady of the Hundred Gates (*Panagia Hekatontapyliani*) *in Paros.* By H. H. JEWELL and F. W. HASLUCK. London: Macmillan, on behalf of the Byzantine Research Fund, 1920. 15×11. Pp. 78, with 14 plates and 56 illustrations in the text. 50*s*.

Just outside the capital of the island of Paros, within an enclosing wall, stands the Church of the Virgin, the most important in this Ægean island. As shown in the photographs, it is a fascinating group of snow-white walls, domes, and bell-turrets, to which a tall feathery palm gives contrast and grace.

The account of the complex of buildings within the enclosure, by Mr. H. H. Jewell and the late Mr. F. W. Hasluck, is admirably clear and well illustrated. Mr. Hasluck's share of the work must be almost the last contribution of this fine and generous scholar to the studies in which he was so accomplished a master.

The buildings are from some points of view of secondary rank, but their completeness and early date give them exceptional interest. Besides the great church there are a smaller attached church, a baptistery like a third church, chapels, cloister, and cells. The smaller church had a basilican plan, but was completed above with a dome; it is suggested that this was a later, but not much later, alteration. The plan, it may be mentioned, only slightly differs from that of our own remarkable early Christian church at Silchester.[1]

The plan of the great church is cruciform, with aisles to the nave opening from the narthex and continuing all round the transepts and having galleries above. This very fine type of plan, as the authors remark, was doubtless derived from that of the Holy Apostles at Constantinople; the selection of such a form suggests that the Parian building was itself on a holy site or a grave-church. There is indeed under the altar a tiny crypt which 'is said to be a miraculous well: the form of the chamber, however, suggests that it was originally designed as a shrine'. On the south side of the bema is an important diaconicon, a complete chapel with apse and vestibule; it has a side-door from the bema exactly on the transverse axis of the altar. On the other side of the bema, in the same line, is a second side-door (now blocked) which entered the older and smaller church. This church, or part of it, must, after the building of the greater edifice, have served as its prothesis until at some late time the door was blocked and a separate little ciborium was set up against the north jamb of the apse. Doubtless this alteration was a consequence of the occupation of the little old church for the Latin rite during the Venetian occu-

[1] For a still closer resemblance to Silchester see the plan of an early Greek church illustrated in a recent number of the Athenian *Ephemeris*. May I suggest here that it would be a really valuable piece of historical realization to build a restored version of the little Silchester church in any place where a small memorial chapel may be required?

pation (see p. 5). The absence of a special prothesis is made a point of in the suggested dating of the church, and it is assigned to the reign of Justinian; but if my reading is right the reasoning would hardly apply. Mr. Hasluck says, 'In later churches, which, if of considerable size, have three apses, the Elements are prepared in the north lateral apse, which for this reason takes the name of *prothesis*' (p. 43). 'It will be noticed that the attribution of the church to Justinian is in conformity with Dr. Freshfield's canon that triapsidal churches are later than the reign of Justin II' (*Archaeologia*, xliv, 383). My own impression, I may say, is that the great church is later than the high moment of the Byzantine culmination—there is dryness and hardness in the details, with the exception of the capitals of the great ciborium, which it is admitted were importations and which moreover had been prepared for another structure. The monogram medallions also seem to me to be further developed than they were in Justinian's time. I should guess the seventh century as the date of the great church, and the smaller side-church need not be much earlier than the other—perhaps the first work of a continuous scheme of building. That such details as the moulded door-frames and the impost capitals of the gallery of the small church should belong to the fifth century seems to me next to impossible. The high proportion of the interior and of the section of the dome of the great church, with the tall windows around the springing, and the perfect form of the pendentives, all point to a later date than that suggested by the authors—'contemporary with the Holy Apostles'. The special distinction of the church at Paros is the preservation within the several buildings of most important early examples of the greater 'fittings'—altar, ciborium, screen, patriarch's-throne, and the great font, all apparently of the date of the buildings. Paros in this respect is probably the most perfect example of Byzantine churches. The altar ciborium has four large columns with slabs cut to arch-forms resting on them; other slabs are laid on these horizontally, cut internally to a circular form; above these, again, rose a fluted dome of thin marble; of this only fragments remain, but it was probably put together in 'gores'. It is large in scale, delightfully frank in construction, and truly beautiful. As Mr. Hasluck remarks, 'the ciborium at Paros is probably unique in Greece'. The screen was a row of four similar columns, with dado slabs across the lower part of the intervals excepting at the central door; the enclosing slabs were charged with crosses in relief and monograms in discs. The apse was surrounded by rising tiers of marble benches, with the archbishop's chair at the back in the centre and two other special, but inferior, seats, one on either hand. The font occupied the eastern space in front of the apse of the small church-like baptistery, which had a little dome over its nave. The basin was a cross in plan, of considerable size, and formed of carved slabs mitred at the angles; in two of the arms were descending steps and in the centre was a short column, standing loosely, on which a lamp was placed. Such cruciform fonts are known elsewhere: the idea of baptism in the cross is impressive.

Many antique Greek fragments were used in the buildings. A complete doorway of elegant work is thus reused, and over the central

door of the church was a moulding carved with two rows of elegant 'egg and tongue'. If Mr. Jewell has fuller details of these it might be well to record them. Two marble slabs carved with figures are mentioned which 'appear to be parts of a coffered ceiling of Graeco-Roman date'.

The church is almost entirely built of the fair Paros marble, but, notwithstanding, it seems always to have been whitewashed—'the external wall faces are covered with successive coats of whitewash which are now more than an inch thick'. Those who seek for authority for the use of limewash on ancient buildings will hardly find it any thicker than this. W. R. LETHABY.

The British Academy Records of the Social and Economic History of England and Wales. Volume iv. I. *A Terrier of Fleet, Lincolnshire.* Edited by Miss N. NEILSON, Ph.D. II. *An Eleventh-Century Inquisition of St. Augustine's, Canterbury.* By the late ADOLPHUS BALLARD, M.A., LL.B. London: published for the British Academy by Humphrey Milford, Oxford University Press, 1920. 10 × 6¼; Pp. lxviii + 214; xxviii + 33.

As to the value of such texts as these to the present-day economist there can be no two opinions. In the first and larger of the two parts of this volume Miss Neilson gives us the text of a document dating from the early fourteenth century, now in the British Museum, and in a long introduction sketches for us the material it contains for establishing early medieval practice with regard to commoning and intercommoning by neighbouring vills in places where the existence of great stretches of waste may naturally be expected to introduce certain modifications and special customs into the normal economy of the medieval manor. From this point of view the particular district here concerned (the fenland of Lincolnshire and the adjacent counties) has points in common with such districts as Dartmoor; but its natural features give it in addition certain characteristics which are peculiar to itself, such as the measures taken to prevent the 'drowning' of the more valuable land by sea or by the choked and overflowing rivers, and their effects upon local custom.

To the last-mentioned points Miss Neilson gives some pages. We notice here in passing that she has not seen or does not agree with Mr. Richardson's ascription of the fully formed Sewers' Commission to the end of the reign of Henry III.[1] She is, however, more interested in the subject of intercommoning, to which she devotes the bulk of her introduction and a large and very elaborate map. Dealing first with fenland north of the Welland, and then with the districts south and east of it, she finally passes to consider in more detail the vill of Fleet itself, for which purpose we are supplied with a second map. We could wish, by the way, that the Academy had economized on something else (these volumes are very sumptuously produced) and given us the maps in a form in which they would not tear and could be inspected without closing the text. The introduction concludes with

[1] Royal Commission on Public Records, *Second Report*, ii, p. 98.

a short description of the manuscript and a necessary history of the family of de Multone, whose career is much involved in the interpretation of certain parts of the Terrier: particularly (Miss Neilson thinks) the awkward marginals in its earlier part.

Miss Neilson is very much on her own ground in most of this introduction. If we may venture a criticism we would say that we have not found it altogether easy reading. It is not reasonable, of course, to look for too much simplicity in such a case, and we should be ungrateful if we did not rather extol the editor's accuracy, her abundant reference to authorities, and her obvious combination of a deep study of her materials with a carefully compiled modern knowledge of the district she describes. Such a work as this is not, of course, for the general reader. At the same time it is intended, we presume, to be intelligible to the average reader of medieval texts, and the present reviewer, if he may claim that position, would confess that he had occasion to verify his interpretation of certain words in the introduction by more than one reference to Neilson on *Customary Rents* and similar authorities. If we allude to this small point it is because we think that the medievalist at present is a little prone to overdo his fear of reiterating what he himself knows very well. Some of us would very much regret it if the young medievalist, a student already much handicapped, were to be deterred by avoidable difficulties.

In the second part of the volume we have the results of a careful examination by the late Mr. Adolphus Ballard of the Domesday statistics printed in Larking's edition of the Kent Domesday from the Cartulary of St. Augustine's, Canterbury, now at the Public Record Office. Mr. Ballard concluded that we have here a copy made in the thirteenth century of another copy made between 1100 and 1154 (possibly about 1124) of an independent compilation made about 1087 from the original returns out of which Domesday itself was put together. By a series of tabular statements he showed that it displays characteristics—a greater local knowledge, a better acquaintance with English names, and so forth—similar to those other compilations from the original returns which we already know from the work of Dr. Round and others (the Cambridge and Ely inquests). The object of compilation, as is pointed out in a passage containing an interesting parallel drawn from present-day administration, was to supply the abbey with a copy of the assessment by means of which it could check the demands of the royal officials. As Mr. Ballard's 'Excerpts' contain certain statistics for the monastery of Holy Trinity, he was able to add to his text in certain parts a third column of parallel passages taken from the *Domesday Monachorum* in the possession of the Dean and Chapter of Canterbury, which he concluded to have been again an independent compilation from the Domesday returns; adding (a new point) that it was so compiled a year after the visit of the commissioners to the county of Kent.

In the second as in the first part of this volume we have the editor speaking with assurance on a subject peculiarly his own, and there is little to be said in criticism of what seems to us a lucid and convincing statement. We should like, however, in conclusion, to refer to a matter common to both parts, the treatment of the texts as such.

If we venture on a certain measure of criticism at this point it should be understood as applying quite as much to the responsible body which produces this volume as to the individual editors. We notice, in effect, a continuance here of the fault which has marred the work of every authority which since the beginning of the last century has set itself to publish medieval texts: that is an unfair preponderance of interest in the subject-matter, the *causa movens* of the publication, in contrast to the text itself. The early nineteenth century considered little except the interests of the genealogist and topographer: in our time the economic element is uppermost. In both cases the publishers seem to forget that other students besides the genealogist and the economist may wish to consult their texts, not only now but in the future: at any rate they show no inclination to enforce systematic rules of textual criticism.

We have little space to illustrate this, and a few examples must suffice. Miss Neilson has obviously been at pains to construct a careful text: she gives us many foot-notes with variant readings and the like and encloses in square brackets what (we believe: we are nowhere told) represents her own comment or modification on the original. Yet we get *disseiseuerunt* (p. 153) and *disseiserunt* (p. 156); *Doningtone* and *Donington* (p. 156: the original has *Donington* in both cases); *communia* (p. 157) and *communa* (p. 153); and the like; all without comment. These are small matters, but they show that textual accuracy has not been a primary consideration, and a rather more important result of this point of view is seen when we turn to the doubtful marginals already mentioned: it is impossible to begin any attempt at their explanation (and they are interesting) without a visit to the British Museum, because we are not even told if they are all in the same hand as that of the body of the document.

We must not labour this matter further, but only add that the second part of this volume shows again peculiarities in rendering the text: the first word quoted—*Exce(r)pta*—contains what only a visit to the MS. shows to be an addition (an incorrect one) by the editor. What is particularly noticeable is that the system of rendering the original is different in the two parts of this single volume. It is really quite time that all persons and bodies concerned in the publication of medieval texts got together to formulate, and abide by, a sound and single system of editing and criticism. HILARY JENKINSON.

An Introduction to the Study of Terra Sigillata, treated from a chronological standpoint. By FELIX OSWALD and T. DAVIES PRYCE. London: Longmans. $10\frac{1}{2} \times 7\frac{1}{2}$. Pp. xii + 286, with 85 plates. £2 2*s*.

A very praiseworthy attempt has been made to condense into this volume an account of the principal features of chronological value in the history of Terra sigillata. To obtain this result the authors must have studied with great care and much labour the very large number of works in many languages on their subject, as well as the reports of excavations where this pottery has been found.

As a summary of what is known of this pottery the work is excellent,

but it will not altogether satisfy the requirements of the serious archaeologist wishing to obtain the fullest details, nor will it relieve the excavator from having to refer to the works from which this volume has been compiled. For those, however, who have not made a detailed study of the ware, this book will be most instructive and helpful, and for obtaining a general idea of the date of the pottery from any particular site it will prove of considerable value. It contains much useful information set out in concise and intelligible form, such as the list of dated sites where this ware has been discovered, a summary of the various pottery sites and the periods of their activities, and a list of well-attested potters. It would have been more convenient had the latter been arranged alphabetically as a whole, rather than by periods. In fact a great addition to this work would have been a full list in tabular form of all the potters, giving provenance, date, forms used, etc., and references to the pages in the text where they are mentioned. As it is, lists of potters are continually being met with under such headings as: Well attested potters, General Description, Potter's stamps on various forms, etc., which necessarily involves a certain amount of repetition and makes the finding of information concerning any particular potter none too easy.

The authors must indeed be complimented on the way in which they have dealt with the classification of the plain forms—a by no means simple matter. The large number of plates showing the different types and their many variations are excellent, and these, together with the text giving the approximate dates, will fill a long-felt want and will undoubtedly be much used for reference. The grouping of some of the more unusual forms under definite types has been done with much success, although in a few instances, such as the inclusion of types 11 and 12, plate l, in the same class as the other examples on this plate, it is open to criticism. The difficulties that must have been encountered by the authors in assigning some examples to any particular group or type is well illustrated by the inclusion—whether intentional or unintentional—of the Pan Rock Type 8 on both plates lv and lix. The fact that there are no references given on the plates to the pages in the text, and that the plates themselves are not numbered consecutively nor in the same order as they are dealt with in the text, is unfortunate, and causes considerable difficulty in finding quickly information about any particular type—a very important point in a book of reference.

In a work of this description it is obviously impossible to deal fully with the many types of decoration on Terra sigillata. The authors have, however, shown great discrimination in selecting their examples of the motives and combinations of motives in use at different periods and on various forms.

The plate of types of ovolo decoration and the accompanying text is one of the best items in the book, and will be of undoubted value in dating small fragments of pottery on which this motive occurs. It would perhaps have been better if the narrow decorative bands used by some potters instead of the ovolo pattern had been treated separately and not under the heading of ovolos, which they most certainly are not; in one instance the authors even refer to an ovolo of urns!

To trace back the derivation of the ovolo, or egg-and-tongue motive, to the lotus bud decoration of the Egyptians would appear to be hardly necessary, and indeed it is a question whether the authors were well advised in spending so much time and labour in endeavouring to find the prototypes of the decorative details. In a work of this description it serves no useful purpose to trace these prototypes back for several centuries, and illustrations comparing such subjects as the Farnese Hercules with representations of that deity on Terra sigillata might with advantage have been omitted and only examples throwing some light on the dating of the pottery should have been included. The Romans were great copyists, and the Terra sigillata potters to a large extent conformed to this racial characteristic by adapting to their own purposes the subjects and designs which they must have seen daily in works of art in stone and metal.

J. P. BUSHE-FOX.

Catalogue of a Collection of Early Drawings and Pictures of London. London: 1920. Privately printed for the Burlington Fine Arts Club. $12\frac{1}{4} \times 9\frac{1}{2}$. pp. 74, with 48 plates.

Those who remember the remarkable and interesting exhibition of Old London Drawings and Pictures at the Burlington Fine Arts Club will be glad to have this fine record. Mr. Philip Norman has contributed a Preface in which he deals briefly with old views of London. The Catalogue furnishes sufficient descriptive particulars of 115 drawings and paintings, the earliest in point of date being a rare pen-drawing by Hollar, and the latest belonging to the early years of the last century. No less than forty-eight are here reproduced. The great majority of these come either from the collection of H.M. the King or from private collections like that of Sir E. Coates. Since the originals are thus not generally accessible, all students of London history and topography will find this volume of great interest. It is needless to state that the reproductions are of fine quality. At the exhibition some select pieces of furniture with a London history were shown as a fitting accompaniment to the drawings. The most important came from the 'Old India House', and were lent by the Secretary of State for India. Other pieces were lent by various City Companies. A descriptive catalogue of them all is included in the present volume.

C. L. K.

An Inventory of the Historical Monuments in Essex; vol. i. Royal Commission on Historical Monuments. London: Stationery Office. $10\frac{3}{4} \times 8\frac{1}{2}$. Pp. xxxvii + 430. £1 10*s*.

Until the Royal Commission had well started on its laborious work nobody can have had a real idea of the wealth of ancient houses which England still retains. The ancient churches were of course obvious to every one; they had been studied and described—or at any rate a vast number of them had—by many writers, they had been visited by many more or less learned societies. But the ancient houses were not so much in the public eye. The more notable ones, of course, were; but there are scores and hundreds situated in remote places, unknown save to the immediate neighbourhood, and by it regarded

merely as dwellings, old fashioned perhaps and a little more interesting than their newer neighbours, but not conveying to the minds of those acquainted with them any part of the long story of domestic architecture of which they are often valuable illustrations.

The inventories published by the Royal Commission on Historical Monuments include all these unknown houses, as well as ancient cottages, which even a student of architecture might pass by with a casual glance. In another direction equally good service is done and a meaning is given to ancient sites which, to the uninstructed eye, appear to be nothing more than mounds and hollows.

These things are all catalogued, described, and, where possible, dated without a trace of sentiment or emotion. The descriptions in an auctioneer's catalogue are vivid in comparison. But the essentials are there, and any inquirer could not do better, when visiting a district, than arm himself with the Commission's inventory and under its guidance find out for himself the treasures he seeks. There are many plans of towns and villages showing the position of every 'monument' that is recorded, also plans of all the churches and of some of the houses. There are photographs also of the most interesting and attractive of the monuments, and these include churches, houses, and cottages as well as particular features in the shape of doorways, windows, screens, pulpits, fonts, tombs, and other objects. From the Sectional Preface a good idea may be obtained of what is best worth seeing and of its connexion with the historical continuity of things. A further help in the choice of what to see may be obtained from the list of monuments especially worthy of preservation. There is an admirable index, and indeed it would be difficult to compile a better book of reference.

It is the north-west part of Essex which is dealt with in this volume, about a quarter of the whole county. Much of it is but little known to the tourist, and it is surprising what a quantity of interesting historical monuments it contains. The churches are not in the first rank, but there are many interesting features within them, and some of them date back to a time prior to the Conquest. The houses are more noteworthy, including as they do the magnificent early castle of Hedingham and the great Jacobean palace at Audley End. There are examples of domestic work of every century from the thirteenth to the eighteenth, amongst the most notable being Horham Hall, Moyns Park, Spains Hall, Broadoaks at Wimbish, and Dorewards Hall at Bocking. But these are only a few out of many good examples. The early eighteenth century, which just comes within the commissioners' terms of reference, is not particularly well represented in this part of Essex, but Quendon Hall has some features of unusual interest.

It is impossible to enter here into any detailed examination of the objects illustrated, but enough has been said to indicate the wealth of interest to be found in the district, and lovers of antiquity might do much worse than make a tour of exploration with this volume as a guide.

J. A. GOTCH.

Periodical Literature

The Journal of the Royal Anthropological Institute, vol. 50, part 1, contains two papers on archaeological subjects, Mr. J. Reid Moir writing on the occurrence of flint implements in the glacial chalky boulder-clay of Suffolk, and Dr. C. G. Seligman on bird-chariots and socketed celts in Europe and China.

The English Historical Review, vol. 86, January 1921, contains articles on the 'Alimenta' of Nerva and his successors, by Miss A. M. Ashley; on Maurice of Rievaulx, second abbot of that house, by Dr. F. M. Powicke; and on the battle of Edgehill, by Mr. Godfrey Davies. Shorter articles include a mention of scutage in 1100, by Mr. W. A. Morris; a Butler's serjeantry, by Dr. Round; the two earliest municipal charters of Coventry, by Dr. Tait; the Parliament of Lincoln in 1316, by Miss H. Johnstone; negotiations for the ransom of David Bruce in 1349, by Mr. C. Johnson, and indentures between Edward IV and Warwick the Kingmaker, by Miss C. L. Scofield.

Proceedings of the Prehistoric Society of East Anglia, vol. iii, part ii (1920). The presidential address by Professor J. E. Marr deals with Man and the Ice Age from the geological standpoint, and summarizes the evidence recently obtained in the neighbourhood of Cambridge, where conditions during the Pleistocene period seem to have been much more complicated than in the Thames valley. He recognizes four cold periods, represented in the Chillesford beds, Cromer Till, Chalky Boulder-clay, and the latest Northern Drift of Wales; the earliest being Pliocene. While accepting Mr. Reid Moir's palaeolithic finds in the boulder-clay at Ipswich, he explains the critical Hoxne section as a palaeolithic horizon between two boulder-clays, the lower being Cromer Till and the upper being Chalky Boulder-clay, since eroded. The professor is inclined to adopt Skertchly's view of the sequence east of the Fens, and has himself made famous the 'Travellers' Rest' pit, one mile north-west of Cambridge. Rev. H. G. O. Kendall, F.S.A. (now president of the Prehistoric Society) continues his comparison of flints from Avebury and Grime's Graves, and Miss Layard records a remarkable find of Pleistocene bones at Ipswich. Mr. Cox's paper on implements from glacial deposits in north Norfolk would have surprised the last generation, but the tide is turning in favour of a pre-glacial date for the Drift types of implements: indeed Mr. Reid Moir is induced, by his discoveries at Mundesley, to look for the true Chelles horizon in the Cromer Forest-bed. Mr. Derek Richardson describes a series of celt-like implements, and more especially a chalk carving from Grime's Graves; and Mr. Dewey groups together a number of celts with one common feature, which he calls a flat base; but as a celt does not stand (but lies) on its face, the normal description would be 'celts with a flat face'. Mr. Burkitt contributes two short papers, and his two pages of illustrations will do more to unravel the mysteries of the graver than his text, which contains an unfortunate misprint ('heeled' for 'keeled' on p. 310), and gives currency to 'beaked burin' as a translation of *burin*

busqué, the obvious rendering of which is 'busked graver'. The number bears witness to considerable activity in prehistoric circles; but, to do justice to the papers, the illustrations should be so arranged as to obviate excessive reduction. It may be useful to refer in conclusion to photographs (p. 209) of the bronze shield found at Sutton, Norfolk, included in the list given in *Proc. Soc. Ant.*, xxxi, 150.

Publications of the Bedfordshire Historical Record Society, vol. v, part ii. Mr. Herbert Fowler continues his Domesday notes dealing with Kenemondwick, which he identifies with an area in Sandy; Mr. Page-Turner writes on the Hillersdens of Elstow, and on Beecher of Howbury in Renhold; Mr. Hamson publishes a grant of free warren to Newnham Priory by Richard II, dated 1385, and Mr. Austin writes on Cutenho, Farley Hospital, and Kurigge. Mr. Fowler in another paper, entitled Munitions in 1224, prints documents relating to the siege of Bedford Castle, and also publishes the first of a series of studies on the Inquisitions post mortem of the county. Mr. F. G. Gurney writes on Yttingaford and the tenth-century bounds of Chalgrave and Linslade, and the Rev. A. G. Kenley publishes the Register of St. Mary's Church, Bedford, 1539–58.

The Journal of the Architectural, Archaeological, and Historical Society for the County and City of Chester, vol. 23, new series, contains papers by the Rev. F. G. Wright on Chester Blue Coat Hospital; by Mr. J. H. E. Bennett on arms and inscriptions sometime in the church of St. Bridget, Chester; by the Rev. W. F. J. Timbrell on the medieval stall-end in Hawarden parish church and contemporary panels in Eastham church, and by Mr. R. H. Linaker on the life of George Clarke, Lieutenant-Governor of New York, 1736–45. The number also contains an appreciative notice of the late Professor Haverfield, especially in connexion with his work on the walls of Chester.

Transactions of the Essex Archaeological Society, vol. 15, part 4. The Rev. G. M. Benton describes a bench end at Wendens Ambo church, with a carving illustrating the legend of the tiger and the mirror. Dr. J. H. Round, in a paper on Rayne and its church, discusses the question of the foundation and endowment of the church, and the derivation of the name of the family of Raynes; Mr. Guy Maynard and Rev. G. M. Benton write on a burial of the Early Bronze Age discovered at Berden, to which Mr. A. G. Wright and Lord Abercromby contribute appendices on beakers; Rev. W. J. Pressy contributes a paper on some lost church plate of the Colchester archdeaconry, and Dr. Round discusses the site of Camulodunum.

The Essex Review, vol. 30, January 1921, contains the first part of a translation of the accounts of ministers of St. Osyth's priory for the year ending Michaelmas 1512, preserved among the records of the Duchy of Cornwall; a paper on the custom of the foredrove, by Rev. E. Gepp; and some notes on the Liberty of Havering-atte-Bower, by Rev. Dr. Smith, and on the bells and ringing annals of Saffron Walden, with extracts from the accounts, by Rev. G. M. Benton.

Papers and Proceedings of the Hampshire Field Club, vol. 8, part 3. The Rev. C. R. Stebbing Elvin contributes some notes on the Solemn League and Covenant in England, with special reference to the parish

of Long Sutton in Hampshire; Mr. Cecil Piper writes on Stansted Park and its owners; Mr. Le Couteur on the remains of ancient painted glass in Stoke Charity church; Mr. Kidner on an unrecorded type of circular earthwork in the New Forest; Dr. Whitehead on Hampshire church bells, an attempt to identify the founders R. B. and I. H.; and Mr. W. J. Andrew on medieval relics from a mysterious interment at Winchester, the relics consisting of a silver penny of Henry III and a circular bronze medallion, probably a talisman. Mr. Craib publishes the first part of a transcription of the inventories of Church goods in Hampshire in 1549, and in the Report of the Archaeological Section there are accounts, amongst other matters, of the opening of barrows at Hayling Island and Weyhill.

Archaeologia Cantiana, vol. 34, 1920. Mr. Charles Cotton continues his transcript of the churchwardens' accounts of the parish of St. Andrew, Canterbury, from 1485–1625; Mr. Arthur Hussey contributes abstracts of the wills of the parishioners of Ash next Sandwich, and Mr. Ralph Griffin writes on the Lepers' Hospital at Swainestrey. There are also papers by Mr. A. G. Little on the Grey Friars of Canterbury, on Arden of Feversham by Mr. Lionel Cust, and on the discovery of the tomb of Abbot Roger II at St. Austin's, Canterbury, by Rev. R. U. Potts. There are also printed abstracts of some Dover Deeds presented to the Mayor and Corporation by Mr. Blair.

The London Topographical Record, vol. xii. Mr. C. L. Kingsford concludes his historical notes on medieval London houses; Mr. Beresford Chancellor contributes an appreciation of Tallis's *Street Views of London*, published soon after the accession of Queen Victoria; Mr. Arthur Bolton writes on Stratford Place, and Dr. Philip Norman contributes an article on Disappearing London, illustrated by photographs taken by the late Mr. Walter Spiers.

The Collections for a History of Staffordshire, edited by the William Salt Archaeological Society, for 1920 consist of the first part of the second volume of Staffordshire Parliamentary History, by Col. Josiah C. Wedgwood, D.S.O., M.P.

Sussex Archaeological Collections, vol. 61, contains a paper, with plan, by Mr. W. D. Peckham, on the conventual buildings of Boxgrove priory; Messrs. E. C. Curwen and E. Curwen write on the Earthworks of Rewell Hill, near Arundel, with plans and sections, and Mr. Hadrian Allcroft on some tentative exploration undertaken on these earthworks. Miss M. H. Cooper publishes a perambulation of Cuckfield in 1629; Dr. F. Grayling describes Kingston-Buci church; Mr. L. J. Hodson publishes extracts from a seventeenth-century account book, and Mr. J. E. Couchman writes on neolithic spoons and bronze loops discovered in Sussex, reprinted from the *Proceedings of the Society of Antiquaries*. Mr. H. M. Whitley contributes a paper on Sanctuary in Sussex; Mr. V. J. B. Torr publishes an Elizabethan return of the state of the Diocese of Chichester, and Mr. L. F. Salzman contributes some notes on the family of Alard. In addition there is a short note on the discovery of two bronze celts at Eastbourne in 1916 and a subject-index of the papers published in vols. 51–60 of the Collections.

The Wiltshire Archaeological and Natural History Magazine, no. 133, vol. 41, December 1920, contains the concluding portion of

Archdeacon Bodington's transcript of the Church Survey in Wilts., 1649–50; the Rev. G. F. Tanner in his notes on the Rural Deaneries of Marlborough and Cricklade, 1812, prints extracts from the Rural Dean's book drawn up by the Rev. C. Francis on the revival of that office in 1811. The excavation of a late-Roman well at Cunetio (Mildenhall), near Marlborough, is reported by Mr. J. W. Brooke, and Mrs. Cunnington adds an illustrated appendix on the pottery found during the excavation.

The Yorkshire Archaeological Journal, vol. 25, part 4, contains a long, fully illustrated article, with plan, on St. Mary's church, Beverley, by Mr. John Bilson, and a transcript by Mr. William Brown, of the Register of York Castle, 1730–43, consisting mainly of a record of executions. There are also notes on Elland church and on the British remains at Hinderwell Beacon.

Vol. 26, part 1, of the same journal consists entirely of the report of the excavation of the Roman site at Slack in 1913–15 by Messrs. P. W. Wood and A. M. Woodward. The paper is completely illustrated and contains a large-scale plan of the fort.

Transactions of the East Riding Antiquarian Society, vol. 23, contains papers by Col. Saltmarshe on the river banks of Howdenshire, their construction and maintenance in ancient days, and on ancient drainage in Howdenshire. Mr. Twycross-Raines writes on Aldbrough church in Holderness, and Mr. T. Sheppard on the origin of the materials used in the manufacture of prehistoric stone weapons in East Yorkshire. Amongst the shorter notes is one on the prehistoric earthwork known as the Castles, at Swine, and one by Mr. Stevenson on an early mention of Hull in the Liberate Rolls of 1228.

The Scottish Historical Review, January 1921, contains articles on the passages of St. Malachy through Scotland, by Canon Wilson; on the jewels of Mary Queen of Scots, by Mr. J. D. Mackie; on early Orkney rentals in Scots money or in sterling, by Mr. J. S. Clouston, and on James Boswell as essayist, by Dr. J. T. T. Brown.

The Transactions of the Glasgow Archaeological Society, new series, vol. 7, pt. 2, contains a paper on James Boswell, an episode of his grand tour (1763–6), by Dr. J. T. T. Brown, the President of the Society; on some old Scots authors whose books were printed abroad, by Dr. David Murray; on Sir John Skene's MS. *Memorabilia Scotica* and Revisals of *Regiam Majestatem*, by Dr. George Neilson; on French privateers on the Galloway coast, by Mr. E. Rodger, and on the citadel of Ayr, by Mr. J. A. Morris.

Proceedings of the Royal Irish Academy, vol. 35, section C, contains two papers (nos. 10 and 11) by Mr. T. J. Westropp, the first on the Assembly Place of Oenach Cairbre and Sid Asail at Monasteranenagh, county Limerick, and the second on Dun Crot and 'The Harps of Cliu', on the Galtees, county Limerick. Paper no. 12 is a description by the Earl of Kerry of the Lansdowne maps of the Down Survey.

Annual of the British School at Athens, no. 23. Half of the volume is occupied by a series of papers on Macedonia, M. Picard writing on the archaeological researches of the French army, Professor Gardner and Mr. Casson on antiquities found in the British zone, Mr. Pryce on a Corinthian pyxis, Mr. Welch on the prehistoric pottery, Messrs.

Cooksey and Woodward on mounds and other ancient sites in the region of Salonika, Mr. Welch on ancient sites in the Strymon valley, Mr. Tod on the inscriptions, and Mr. Woodward on the Byzantine Castle of Avret-Hissar. Other papers are by Messrs. Foat and Tod on Doris; by Mr. Casson on prehistoric mounds in the Caucasus and Turkestan; by Mr. Wace on St. Gerasimos and the English admiral, describing an alleged miracle performed by the saint on behalf of the island of Cephalonia; and by Mr. Welch on the folklore of a Turkish labour battalion. Mr. Wace also publishes some letters written by a British officer on active service in 1799. There are also articles by the late Mr. Hasluck on the rise of modern Smyrna; by Mr. Sealy on Lemnos; by Mr. Casson on Herodotus and the Caspian; by Mr. Tillyard on some Byzantine musical manuscripts at Cambridge; and by Mr. Tod on the Macedonian era.

Bulletin monumental, vol. 79, 1920. MM. Maitre and Douillard write on Langon and its temple of Venus, in which the theory that the chapel of St. Agatha is of pagan origin is discredited; M. Deshoulières contributes a paper on Romanesque corbel tables; M. Vallery-Radot describes the church of Notre-Dame at Longport, and M. Levé the chapter-house of Worcester cathedral. Other papers are by M. Stein on Jean Poncelet, architect of the Duke of Burgundy, and the new chapel at Souvigny; and by M. Lecacheux describing the recently discovered stone reredos at Saint-Ebremond-de-Bonfossé, with panels representing scenes from the Passion, the Resurrection, and the Descent into Hades.

Comptes rendus de l'Académie des Inscriptions et Belles-Lettres, March–May 1920, contains papers by M. Paul Monceaux on an invocation to 'Christus medicus' on a stone from Timgad; on the rock of Perescrita near Cenicientos, Madrid, by M. Pierre Paris; on Greek graffiti in the tombs of the kings at Thebes, by M. Jules Baillet; on the martyrs of Bourkika, by M. Monceaux; on the succession of the Mazdean princes, by M. J. de Morgan; on two inscriptions from Annobari, by M. L. Poinssot; and on intaglios with representations of geniuses of the Ophite sect, by M. A. Blanchet. There is also a plan of Carthage showing the position of the Punic tombs and of the principal buildings, with a full bibliography, by M. Merlin.

The June–August 1920 number of the same publication contains communications by M. Paul Monceaux on a bronze cross, inscribed *Antiqua-Postiqua*, found at Lambèse; by Père Delattre on the basilica of St. Monica at Carthage; by M. Charles Diehl on a Greek inscription from the basilica at Ererouk; by M. Edmond Pottier on an archaic colossal statue of Hermes Kriophoros discovered at Thasos; by M. H. Sottas on the unpublished Demotic papyrus no. 3 at Lille; by M. J. de Morgan on an unidentified sign on Sassanian coins; by M. A. Gabriel on the excavations at Fôstat; by Père Villecourt on the date and origin of the homilies attributed to Macarius; by Dr. Carton on the discovery of an antique fountain at Carthage; by M. F. Cumont on the underworld according to Axiochos; and by M. L. Poinssot on the 'Civitas Mizigitanorum' and the 'Pagus Assalitanus'.

Bulletin de la Société des Antiquaires de Normandie, vol. 33, contains

papers on the Hôtel le Valois d'Escoville at Caen, by M. G. Le Vard; on parsons, by l'abbé Masselin; and on the meaning of the canonical terms 'persona' and 'personatus' in Normandy from the twelfth to the fourteenth century, by M. Guillaume. M. Prentout writes on the origins of Caen, and on some charters of the dukes Richard II and Richard III; Dr. Gidon on the site of Caen at different epochs and especially in the tenth century; and M. Yvon on Francis Douce's views on Gothic art as shown in his correspondence with the Abbé de la Rue, and also, among the shorter papers in the volume, on Sir Walter Scott's relations with the same abbé.

The last volume, that for 1918, of the *Précis analytique des travaux de l'Académie des sciences, belles-lettres et arts de Rouen* contains among other papers articles by M. Valin on Walter of Coutances, archbishop of Rouen and Justiciar of England during the reign of Richard I; by Canon Davranches on the ancient obligation of praying standing; and by M. Delabarre on the Gaulish spirit at the time of the Roman occupation (an essay on the romanization of Gaul).

Mémoires de la Société royale des Antiquaires du Nord, 1918–19 (Copenhagen), pp. 241–370. Twenty years ago the discoveries of G. L. Sarauw at Mullerup (Maglemose, Zealand) put a new complexion on the Early Stone Age of Scandinavia, and any lingering doubts with regard to a Bone Age before the earliest Shell-mounds are now dispelled by K. F. Johansen's detailed report on a parallel find in the peat at Sværdborg, in the south of the same Danish island. The Copenhagen standard is a high one, and specialists have combined to make both the exploration and the report a model of procedure. The turbary in question is about 3 ft. above the sea and only passable in summer, having originally been an inland lake with a bottom of stony sand, successively covered by thin layers of brown and light grey mud; 7 in. of peat with roots and stems of sedges; 19 in. of a different peat with alder and reed; and a turfy layer of 6 in. at the top. The prehistoric level was towards the base of the lower peat, and occupied vertically no more than 6 in., the whole dating from a time when the pine and Ancylus shell were characteristic of the region, and the Baltic was a fresh-water lake.

In the 404 square metres excavated no less than 102,402 flints were found, a quantity that gives added significance to absentees. Blades and end-scrapers on blades were included, but the round scraper was the commonest type, and the shell-mound axe and pick were poorly represented. Only one transverse arrow-head was found, the type being unknown at Mullerup and abundant in the shell-mounds. Of the pygmies most were of the long triangular form, and when laid on the flat face 700 were found to have the longer side on the right, 100 on the left. Leaf-shaped and segmental specimens were rare, and there were no rhomboidal or trapezoidal examples so common later. Bone and deer antler were used for adzes with oblique edges, and also for sockets to hold stone or boar's-tusk with the cutting edge set at right angles to the line of the haft. The axe was evidently a later invention, and points with one or more barbs on one side were earlier than the true harpoons of the Kunda culture of Esthonia. Bird-arrows with flint flakes set in the lateral grooves belong to this period, but survived

in the Danish shell-mounds and still later in Norway and Sweden. The fauna, too, including the aurochs and elk, preceded the shell-mounds, and there was both here and at Mullerup a total absence of pottery. The culture seems to have moved from south-east to north-west, but is still not the earliest in Denmark. A little later than Mas d'Azil, it seems to precede that of Tardenois; and the discovery may eventually throw light on the recent hypothesis that a long-headed population living on low islands in lakes of the interior were gradually displaced by short-headed invaders who preferred to settle on the sea-shore for the sake of the shell-fish (Lindqvist in *Rig*, 1918, p. 65). The illustrations are as usual unsurpassable, and provide a series of contemporary types that cannot fail to be of the greatest utility for comparison. There are large areas of peat also in the British Isles.

Fornvännen: Meddelanden från K. Vitterhets Historie och Antiquitets Akademien (Stockholm), 1920, part 3. The number opens with an attempt by Hr. Lindqvist to account for the unequal distribution and general scarcity of pre-Roman Iron Age antiquities in Scandinavia. The Hallstatt culture of central Europe can be traced as far north as central Jutland; and La Tène is represented in the Isle of Gotland; but otherwise the Early Iron Age has left scarcely any traces in the north; and the author finds an explanation in Professor Sernander's contention, that the climate suddenly deteriorated after the Bronze Age and rendered the area in question barely habitable. Arguments for and against this view may be found in the remarkable report of the geological congress at Stockholm in 1910 (*Die Veränderungen des Klimas seit dem Maximum der letzten Eiszeit*). In 1916 Professor Montelius pointed out that some time before 500 B.C. the headquarters of the amber trade shifted from Jutland to the mouth of the Vistula, and gold and bronze no longer came to Scandinavia in exchange. Apart from the face-urns, West Prussia was, however, as poor as the north during the pre-Roman Iron Age; and the amber trade apparently declined or ceased altogether.

Whether this climatic change extended to central Europe or not, it is evident that Celtic culture was in a flourishing condition at the time on the Danube and Middle Rhine. The effect of the Hansa League on Gotland in the middle ages is called to witness, the suggestion being that the Celts of central Europe had a monopoly of trade that isolated and impoverished the north in pre-Roman times; and an east-and-west barrier across Europe lasted till the Teutonic tribes passed southwards as far as Switzerland in the last century B.C. In the reign of Nero Baltic amber was again being exported by the eastern European route, and the Celtic line was turned.

An article by Otto Rydbeck is a useful reminder that certain flint types belonged to more than one period, the shell-mound axe, the scraper, and transverse arrow-head, for instance, remaining in fashion down to the period of chambered barrows. This is clear, it is argued, from the discovery of these forms with polished celts or fragments, the imprint of grain on pottery, and the bones of domestic animals in the upper levels of the well-known Järavallen, a sand-bank parallel to the shore at Limhamn, near Malmö; the main deposit below being attributed to the shell-mound period. Several other cases are cited of

tue association of early and late Stone Age specimens, but no attempt is made to upset the chronological system now generally accepted. The later Stone Age of Scandinavia begins with polished flint, but the leading types of the shell-mounds, far from going out of use, persisted almost throughout the megalithic period. Truly the way of the excavator is hard.

Mitteilungen der Antiquarischen Gesellschaft in Zürich, vol. 29, part 1, contains the first instalment of a paper by Herr Robert Hoppeler on the collegiate church of St. Peter in Embrach, with the text of the 1454 statutes printed in an appendix and two plates of the seals of the chapter and provosts, eighteen examples in all.

Oudheidkundige Mededeelingen uit 's Rijksmuseum van Oudheden te Leiden, 1920, part 2, contains articles on Saxon burghs in the Netherlands, by Dr. Holwerda; on Frankish funerary objects found in the church of St. Servais at Maestricht and on excavations at the monastery of Egmond by Dr. Holwerda.

Annales du Service des Antiquités de l'Égypte, vol. 19, contains the following papers: summary report on the excavations in Theban necropolises in 1917 and 1918, by M. H. Gauthier; selected Papyri from the archives of Zenon, by Mr. C. C. Edgar; Greco-Roman Egypt, by M. G. Lefebvre; a statue of Zedher the saviour, by M. G. Daressy; Nahroou and his martyrdom, by M. H. Munier; an obituary notice and bibliography of Georges Legrain, by M. P. Lacan; a fragmentary stela from Abousir, by M. G. Daressy; the obelisk of Qaha, by M. G. Daressy; the remains of a statue of Nectanebo II, by M. G. Daressy; mummy plaques, by M. G. Daressy; digging at Zawiet Abu Messallam, by M. Tewfik Doulos; funerary statuettes found at Zawiet Abu Mossallam, by M. G. Daressy; Abousir d'Achmounein, by M. G. Daressy; notes on Luxor in the Roman and Coptic period, by M. G. Daressy; on the sign *Mes*, by M. G. Daressy; Theban statues of the goddess Sakhmet, by M. H. Gauthier; excavations in the necropolis of Saqqarah, by Mohammad Châban Effendi; tombstones from Tell el Yahoudieh, by Mr. C. C. Edgar; sundry Coptic texts, by M. H. Munier; and the camp at Thebes, by M. G. Daressy.

The American Journal of Archaeology, vol. 24, no. 4, contains articles by Mr. T. L. Shear on a marble head of Aphrodite from Rhodes; by Mr. L. B. Holland on Primitive Aegean roofs; by Mr. R. G. Mather on documents relating to the will of Luca di Simone della Robbia, and by Mr. S. B. Luce on Etruscan shell-antefixes in the University Museum, Philadelphia.

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*A History of the British Army. By the Hon. J. W. Fortescue. 9×6. Pp., vol. ix, xxv + 533; vol. x, xviii + 458. Macmillan. £2 8*s*.

*Final Concords of the County of Lincoln from the Feet of Fines preserved in the Public Record Office, A.D. 1244–1272; with additions from various sources, A.D. 1176–1250. Vol. ii. Edited by C. W. Foster, M.A., F.S.A. Lincoln Record Society, vol. 17. $10 \times 6\frac{1}{4}$. Pp. lxxxi + 448. Horncastle.

*Wessex Worthies (Dorset), with some account of others connected with the history of the County, and numerous Portraits and Illustrations. By J. J. Foster, F.S.A. With an introductory note by Thomas Hardy, O.M. $9\frac{3}{8} \times 7\frac{1}{2}$. Pp. xix + 167. London.

The Burford Records. A study in minor town government. By R. H. Gretton. $9\frac{1}{4} \times 6$. Pp. xx + 736. Oxford: Clarendon Press. 42*s*.

*The Assembly Books of Southampton. Vol. ii, 1609–1610. Edited by J. W. Horrocks. Publications of the Southampton Record Society. $10\frac{7}{8} \times 6\frac{3}{8}$. Pp. xliii + 119. Southampton.

*The Elizabethan Estate Book of Grafton Manor, near Bromsgrove, with particulars of the re-building of the Mansion in 1568–1569. By John Humphreys. Reprint from Trans. Birmingham Arch. Soc., vol. 44. $9\frac{1}{2} \times 6$. Pp. 124.

The Historical Criticism of Documents. By R. L. Marshall. $7\frac{1}{4} \times 4\frac{3}{4}$. Pp. 62. Helps for Students of History Series. S.P.C.K. 1*s*. 3*d*.

*Lille before and during the War: illustrated Michelin guides to the battlefields. $8\frac{1}{2} \times 5\frac{1}{2}$. Pp. 64.

*Amiens before and during the War: Michelin's illustrated guides to the battlefields. $8 \times 5\frac{3}{8}$. Pp. 56.

*Battlefields of the Marne: illustrated Michelin guides to the battlefields. $8 \times 5\frac{1}{2}$. Pp. 264.

Ireland, 1494–1829. By Rev. R. H. Murray. $7\frac{1}{2} \times 5$. Pp. 32 + 48 + 47. Helps for Students of History Series. S.P.C.K. 3*s*. 6*d*.

*Ireland under the Normans, 1216–1333. By G. H. Orpen. $9\frac{1}{4} \times 6$. Vol. iii, pp. 314; vol. iv, pp. 342. Oxford: Clarendon Press. 30*s*.

*The Evolution of Parliament. By A. F. Pollard. 9×6. Pp. xi + 398. Longmans. 21*s*.

The Navy in the War of 1739–48. By H. W. Richmond. 3 Volumes. $9\frac{1}{2} \times 6\frac{1}{2}$. Pp. xxi + 282; 279; 284. Cambridge University Press. £6 6*s*.

*Documents illustrative of the Social and Economic History of the Danelaw. Edited by F. M. Stenton. $10\frac{1}{4} \times 6\frac{3}{4}$. Pp. clxiv + 554. For the British Academy. Milford. 31*s*. 6*d*.

A History of Scotland, from the Roman Evacuation to the Disruption, 1843. By C. S. Terry. $8 \times 5\frac{3}{4}$. Pp. lv + 653. Cambridge University Press. 20*s*.

*Calendar of the Manuscripts of the Marquess of Ormonde, K.P., preserved at Kilkenny Castle. Vol. 8. Historical Manuscripts Commission. $9\frac{5}{8} \times 6$. Pp. lv + 460. London: Stationery Office. 4*s*.

Extracts from the Newcastle-upon-Tyne Council Minute Book, 1639–56. $8\frac{3}{4} \times 5\frac{3}{4}$. Pp. xxiii + 243. Newcastle-upon-Tyne Records Committee.

Social Scandinavia in the Viking Age. By M. W. Williams. $8\frac{3}{4} \times 5\frac{3}{4}$. Pp. xiv + 451. Macmillan. 36*s*.

Indian Archaeology.

*Archaeological Survey of India: Annual Report, 1914–15. Edited by Sir John Marshall, Kt., C.I.E., M.A., Litt.D., F.S.A., Director General of Archaeology in India. $12\frac{5}{8} \times 10$. Pp. x + 150. Calcutta. 19 rupees.

Place-Names.

*The Place-Names of Northumberland and Durham. By Allen Mawer. $8\frac{1}{2} \times 5\frac{3}{8}$. Pp. xxxviii + 271. Cambridge University Press. 20*s*.

Plate.

*Victoria and Albert Museum: Catalogue of English Silversmiths' Work, Civil and Domestic. $9\frac{5}{8} \times 7\frac{3}{8}$. Pp. 75, with 65 plates. London: Stationery Office. 4*s. 6d.*

Prehistoric Archaeology.

*The needles of Kent's cavern, with reference to needle origin. By Harford J. Lowe. Reprint from Journal of Torquay N. H. Soc. $8\frac{1}{2} \times 5\frac{1}{2}$; pp. 14.

*The Earthworks of Bedfordshire. By Beauchamp Wadmore. $11 \times 8\frac{1}{2}$. Pp. 270, with 98 illustrations. Bedford.

*Rogalands Stenalder, utgitt av Stavanger Museum. By Helge Gjessing. Pp. 181, with plates. $10\frac{1}{2} \times 7\frac{7}{8}$. Stavanger, Norway.

Roman Archaeology.

The old Roman road in West Kent (from Greenwich to Springhead). By Rev. F. de S. Castells. $8\frac{1}{2} \times 5\frac{1}{2}$. Pp. 13. Dartford Antiquarian Soc. 6*d.*

Proceedings of the Society of Antiquaries

Thursday, 25th November 1920. Lt.-Col. Croft Lyons, Vice-President, in the Chair.

Mr. Ralph Griffin, F.S.A., read a paper on the heraldry in the Chichele porch at Canterbury Cathedral, which will be printed in *Archaeologia.*

Thursday, 2nd December 1920. Sir Hercules Read, President, in the Chair.

Mr. Reginald Smith, F.S.A., read a paper on Irish gold crescents, illustrated by examples exhibited by the Drapers Company and the Royal Institution of Cornwall (see p. 131).

Mr. L. H. Dudley Buxton, M.A., read a paper on the excavations at Frilford (see p. 87).

Thursday, 9th December 1920. Sir Hercules Read, President, in the Chair.

The meeting was made special to consider the draft of the proposed new statutes, which, after amendments, were carried unanimously.

Thursday, 16th December 1920. Sir Hercules Read, President, in the Chair.

Mrs. Eugénie Strong, LL.D., was admitted a Fellow.

Sir Lawrence Weaver, K.B.E., F.S.A., exhibited on behalf of the Ministry of Agriculture a stone axe discovered on the Ministry's farm settlement at Amesbury (see p. 125).

Mr. C. R. Peers, Secretary, and Mr. Reginald Smith, F.S.A., read a paper on excavations at Wayland's Smithy, Berks., which will be published in the *Antiquaries Journal.*

Thursday, 13th January 1921. Sir Hercules Read, President, in the Chair.

Dr. Ellis Howell Minns was admitted a Fellow.

Votes of thanks were passed to the editors of *The Athenaeum, Notes and Queries*, and *The Builder* for the gift of their publications during the past year.

The following were elected Fellows of the Society: Miss Gertrude Lowthian Bell, Mr. William Richard Lethaby, Mr. Edgar John Forsdyke, Dr. Eric Gardner, Mr. Bryan Thomas Harland, Mr. George Edward Kruger Gray, Rev. Edwin Oliver James, Mr. Frederick Tyrie Sidney Houghton, and Mr. Eric Robert Dalrymple Maclagan, C.B.E.

Thursday, 20th January 1921. Sir Hercules Read, President, in the Chair.

Mr. Eric Maclagan and Mr. George Kruger Gray were admitted Fellows.

On the nomination of the President, the following were appointed Auditors of the Society's accounts for the year 1920: Messrs. Francis William Pixley, Percival Davis Griffiths, Ralph Griffin, and William Longman.

Rev. H. F. Westlake, F.S.A., read a paper on the eastward and other additions to the greater English churches, compiled mainly from notes by the late Sir William St. John Hope, which will be printed in *Archaeologia*.

Thursday, 27th January 1921. Sir Hercules Read, President, in the Chair.

Rev. Edwin Oliver James and Mr. Robin George Collingwood were admitted Fellows.

Mr. A. Leslie Armstrong, F.S.A. (Scot.), exhibited a flint-crust engraving from Grime's Graves, Norfolk (see p. 81).

Mr. R. G. Collingwood, F.S.A., read a paper on the Tenth Iter, which will be printed in *Archaeologia*.

Thursday, 3rd February 1921. Sir Hercules Read, President, in the Chair.

The President referred to the sudden death on Wednesday, 2nd February, of Mr. George Clinch, the Society's clerk and librarian, and proposed that a letter of condolence be sent to the widow and family.

Dr. Philip Norman seconded the proposal, which was carried unanimously.

Mr. F. Lambert, F.S.A., read a paper on recent excavations in the City of London, to which Professor Keith, F.R.S., added a note on a Roman skull found in the City. The papers will be printed in *Archaeologia*.

Thursday, 10th February 1921. Lt.-Col. Croft Lyons, Vice-President, in the Chair.

Mr. Edgar John Forsdyke was admitted a Fellow.

Mr. E. Neil Baynes, F.S.A., exhibited a neolithic bowl and other objects found in the Thames, and Mr. O. G. S. Crawford exhibited

five hoards of the Bronze Age. Both papers will be published in the *Antiquaries Journal.*

Thursday, 17th February 1921. Sir Hercules Read, President, in the Chair.

Mr. W. Dale, F.S.A., presented a report as Local Secretary for Hampshire, containing (*a*) an interim report on the excavations made by Mr. H. Sumner, F.S.A., on pottery sites in the New Forest, and (*b*) a note on a hoard of iron currency bars found at Worthy Down, Winchester, by Mr. R. W. Hoolley.

Mr. H. Clifford Smith, F.S.A., exhibited an English fifteenth-century painted panel.

Dr. W. W. Seton, F.S.A., read a paper on the Scottish regalia and Dunottar Castle.

Dr. W. L. Hildburgh, F.S.A., exhibited some alabaster tables, and Rev. W. G. Clark-Maxwell, F.S.A., exhibited an alabaster table of the Ascension.

The above papers will be published in the *Antiquaries Journal.*

Mr. J. S. O. Robertson Luxford exhibited a fifteenth-century wood-carving representing the Judgement of Solomon, and Mr. Aymer Vallance, F.S.A., exhibited a fifteenth-century chest with painted panels.

Thursday, 24th February 1921. Mr. C. L. Kingsford, Vice-President, in the Chair.

Lt.-Col. J. B. P. Karslake, F.S.A., read a paper on further observations on the polygon type of settlement in Britain, which will be published in the *Antiquaries Journal.*

Thursday, 3rd March 1921. Sir Hercules Read, President, in the Chair.

Brigadier-General Herbert Conyers Surtees, C.B., C.M.G., D.S.O., M.P., was admitted a Fellow.

The following were elected Fellows of the Society: Miss Nina Frances Layard, Very Rev. Albert Victor Baillie, Dean of Windsor, Rev. Francis Neville Davis, Sir Ivor Atkins, Mr. Saxton William Armstrong Noble, Mr George Edwin Cruickshank, Lt.-Col. Oliver Henry North, D.S.O., Mr. Arthur Edwin Preston, Mr. Cyril Thomas Flower, Mr. Charles Igglesden, Mr. Pretor Whitty Chandler, Mr. Eric George Millar, and Capt. George Harry Higson.

Thursday, 10th March 1921. Sir Hercules Read, President, in the Chair.

Miss Nina Frances Layard, Mr. Cyril Thomas Flower, and Mr. George Edwin Cruickshank were admitted Fellows.

Professor J. L. Myres, M.A., F.S.A., communicated a paper by Mr. S. Casson, M.A., on the Dorian Invasion in the light of recent discoveries, which will be published in the *Antiquaries Journal*